AIR POLLUTION CONTROL OPERATION PERMIT

EI FACILITY NO: 445031180 PERMIT NO.: 445031180-P21

Operation Permit Action Type: Revision

In compliance with the provisions of Chapter 285, Wis. Stats., and Chapters NR 400 to NR 499, Wis. Adm. Code,

Name of Source: Expera Specialty Solutions LLC
Street Address: 600 Thilmany Rd,
Kaukauna, Outagamie County, Wisconsin
Responsible Official, & Title: Lee Hammen, Mill Manager

is authorized to operate a kraft pulp and paper mill in conformity with the conditions herein.

[This operation permit expires on **July 19, 2021** [Section NR 407.09(1)(b)1., Wis. Adm. Code]. No permittee may continue operation of a source after the operation permit expires, unless the permittee submits a timely application for renewal of the permit. If a timely application for renewal has been submitted, the existing operation permit will not expire until the renewal application has been finally acted upon by DNR. [ss. 227.51(2), 285.62(8)(b), Wis. Stats. and NR 407.04(2), Wis. Adm. Code]. A renewal application must be submitted at least 6 months, but not more than 18 months, prior to the expiration date of the renewed operation permit listed above [ss. 285.66(3)(a), Wis. Stats. and NR 407.04(2), Wis. Adm. Code].

The conditions in this permit that originated in a construction permit are permanent and may only be revised through a revision of the construction permit condition, revision of a construction permit, or through the issuance of a new construction permit. [s. 285.66(1), Wis. Stats.]

Conditions of the permit marked with an asterisk (*) have been created outside of Wisconsin's federally approved State Implementation Plan (SIP) and are not federally enforceable.

This authorization requires compliance by the permit holder with the emission limitations, monitoring requirements and other terms and conditions set forth in all Parts hereof.

Dated at Oshkosh, Wisconsin January 12, 2017

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By /s/ IRH
Imelda Hofmeister, Environmental Engineer Supervisor

PREAMBLE TO OPERATION PERMIT

An Asterisk (*) throughout this document denotes legal authority, limitations and conditions which are not federally enforceable [Section NR 407.09(3)(b), Wis. Adm. Code.].

Historical Summary of Permits/Orders Issued to the Facility.

Permit/Order Number	Date Issued	Sources covered and description[1]	Permit Status
86-DLJ-058	November 20, 1986	Authorizes venting of total reduced sulfur (TRS) gas from 4 digesters, blow tanks, and turpentine condenser systems to the lime kiln for incineration	Adopted by 445031180-P20
86-SJK-072	July 28, 1987	Elective Operating Permit (EOP) establishes alternate S02 limits under NR 417.07(5), other limits, fuel-type and monitoring restrictions for B07, B08, B09, B10 and B11. B07 is permitted to burn wood waste, paper broke, residual fuel oil and natural gas. B08 and B10 are permitted to burn Kraft liquor, residual fuel oil and natural gas. B09 and B11 are permitted to burn bituminous coal, paper broke, residual fuel oil and natural gas. B11 is also permitted to burn #2 oil. Coal sulfur content limited to 4.4%. Residual oil sulfur content is limited to 2.5%.	Revised by 86-SJK-072A
86-SJK-072A	January 29, 1991	EOP altered to authorize construction of a 174 foot ESP bypass stack for burning natural gas or residual fuel in B08 and B10, with PM limit of 0.287 Lb/MMBtu.	Revised by 86-SJK-072B and 86-SJK-024C
86-SJK-072B	August 2, 1991	EOP altered to include bituminous coal/petroleum coke blend for B09 and B11, with up to 30% by weight petroleum coke, 275 ppm nickel and 95% ESP removal of nickel, to remain below NR 445, Wis. Adm. Code Table 3B threshold.[2]	Revised by 86-SJK-072C, 86-SJK-072-R1 and 86-SJK-024C
86-SJK-072C	November 13, 1992	EOP altered to: 1) authorize construction of ESP bypass stack on B09 and B11 when burning at least 85% natural gas, and boiler startup, and 2) allow burning 13% Tire-derived fuel in B07, 7% TDF in B09, B11 each; and 4 tpd Presto Products polyethylene fuel in B07, B09, B11combined.	Revised by 86-SJK-072D and 86-SJK-072-R1
86-SJK-072D	June 21, 1993	86-SJK-072C altered to: 1) restrict residual fuel oil use in B07, B08, B10 and P12 combined to 333,333 gallons per month and 25 ppm nickel, and 2) reduced pet. coke weight fraction in B09 and B11 to 25%; to remain below NR 445, Wis. Adm. Code Table 3B threshold.[3]	Revised by 86-SJK-072-R1

[1] Total Facility refers to all existing units at the facility at the time of issuance of the permit listed.

[2] Threshold values for nickel were revised in 2004 and are currently listed in Table A of s. NR 445.07, Wis. Adm. Code.

[3] NR 445 threshold values for nickel were revised in 2004 and are currently listed in Table A of s. NR 445.07, Wis. Adm. Code.

Permit/Order Number	Date Issued	Sources covered and description[1]	Permit Status
86-SJK-072-R1	March 20, 1997	Alterations which: 1) replaced limits in permit 86-SJK-072D on residual fuel oil and ESP, with residual oil limits of 266,667 gallons per month and 16 ppm nickel; and, 2) replaced limits in 86-SJK-072B on coal/coke and ESP, with pet. coke limits of 1,583 tons per month and 400 ppm nickel. Alteration also added control device requirements.	Adopted by 445031180-P01
86-SJK-024	May 7, 1986	Authorizes use of lime kiln and wet scrubber with continuous monitoring requirements of TRS and oxygen (O_2) and restriction to burn only natural gas (NG).	Revised by 86-SJK-024A
86-SJK-024A	July 16, 1986	Modification of 86-SJK-024 permit to authorize use of #6 fuel oil in addition to natural gas. To avoid Prevention of Significant Deterioration (PSD) requirements, set a NOx limit to insure NOx increase was less than 40 tons per year.	Revised by 86-SJK-024B
86-SJK-024B	January 27, 1992	Modification of 86-SJK-024A to authorize discontinuation of monitoring bleed rate from the lime kiln wet scrubber but continue monitoring and recording liquid flow rate, temperature, supply pressure, and pressure drop across scrubber and centrifugal separator	Revised by 86-SJK-024C
86-SJK-024C	June 21, 1993	Modification of permits 86-SJK-024B, 86-SJK-072A, 86-SJK-072B to limit source operations for Boilers B07, B08, B09, B10 and B11 and Process P12 to ensure the NR 445 250 pounds of nickel per year limit is not exceeded.[4]	Revised by 86-SJK-024-R1
86-SJK-024-R1	March 20, 1997	Modification of 86-SJK-024C and 86-SJK-072D authorizing nickel content, usage, and weight fraction of petroleum coke in B09 and B11; authorizing nickel content and usage of residual fuel oil for B07, B08, B09, B10, and B11; authorizing removal of control efficiency as requirement (unable to demonstrate continual compliance with limitation). The new configuration did not increase the potential amount of emissions of an air contaminant not previously emitted.	Adopted by 445031180-P01
90-POY-020	February 19, 1991	Authorize use of B11 to operate as a back-up combustion system for noncondensible gas (NCG) in order to control TRS emissions from the pulp mill	Revised by 90-POY-020A
90-POY-020A	November 13, 1992	Modification of 90-POY-020 authorizing a change in SO2 emission limitation for B11 without changing allowable monthly SO2 emission limits (emissions from NCG containing TRS was set to avoid a PSD review and heat input of B11 was included to ensure that there was no overall increase in SO2 emissions)	Revised by 90-POY-020B
90-POY-020B	August 2, 1993	Modification to 90-POY-020A authorizing B11 to burn TDF and Presto Products polyethylene in addition to other permitted fuels	Adopted by 445031180-P01

[4] NR 445 threshold values for nickel were revised in 2004. Instead of a single threshold value of 250 pounds per year, there are now four threshold values for four different stack height ranges.

Permit/Order Number	Date Issued	Sources covered and description[1]	Permit Status
93-CTS-413	July 6, 1993	Modification authorizes paper coater on #11 paper machine with emission restrictions in order to remain below NR 405, Wis. Adm. Code limits for PSD applicability.	Revised by 93-CTS-413-R1
93-CTS-413-R1	May 11, 1999	Revision to remove requirements of s. NR 422.07(2), Wis. Adm. Code, because the paper coater (size press) is part of the paper making process, not a separate coating line. Issued concurrently with original Title V operation permit.	Adopted by 445031180-P01
95-POY-098	November 6, 1995	Authorize use of back-up boiler for maintenance and emergency outages with stack dimension requirements, fuel type and hour of operation restrictions	Adopted by 445031180-P01
98-SSG-413	July 16, 1998	Construction permit exemption for two liquor storage tanks.	Included in 445031180-P01
98-SSG-414	July 16, 1998	Construction permit exemption for the screening and cleaning system.	Included in 445031180-P01
98-SSG-415	July 16, 1998	Construction permit exemption for the decker system.	Included in 445031180-P01
445031180-P01	May 11, 1999	Original Title V operation permit for the total facility.	Renewed by 445031180-P10
99-SDD-109	September 13, 1999	Construction permit authorizes new collection tanks: T09 - blow heat condenser condensate and T10 – central foul condensate, and establishes requirements for P12, B11, and MACT 40 CFR Part 63, Subpart S affected sources.	Adopted by 445031180-P10
99-DCF-152	November 16, 1999	Exemption. Allowed use of up to 5 tons of corrugated box clippings per digester batch when cooking softwood chips.	Included in 445031180-P10
00-DCF-502	December 19, 2000	Exemption. Addition of converting equipment including a wax coater, flexographic press, natural gas-fired flame treater, and three rewinders.	Included in 445031180-P10
03-MHR-010	April 21, 2003	Authorized construction and initial operation of 10-color flexographic press P72.	Adopted by 445031180-P10
99-SDD-109-R1	May 20, 2008	A revision to construction permit 99-SDD-109 to correct an error in the emission limit for particulate matter for boiler B11. The boiler was modified in 1999 after installation of LVHC off-gas piping. The modification causes the applicable emission limits to be 0.10 pound per million Btu (mmBTU) heat input per s. NR 415.06(2)(c), Wis. Adm. Code, instead of 0.30 lb per mmBTU. A lower mass emission rate of 37.9 pounds per hour is also established.	Adopted by 445031180-P10
445031180-P10	May 20, 2008	Title V renewal for the total facility.	Revised by 445031180-P12
09-POY-227-EXM	November 9, 2009	Exemption. Replacement of boiler tubes and economizer for Boiler B08.	Included in 445031180-P20
09-POY-259	February 25, 2010	Modification of the Nos. 11, 12, 13, 14 and 15 paper machine complexes to create production increases.	Adopted by 445031180-P20

Permit/Order Number	Date Issued	Sources covered and description[1]	Permit Status
445031180-P12	November 16, 2011	Revise permit administratively to correct NR 445 limits and compliance demonstration that were incorrectly included/changed in the renewal. Changed to the original text from 445031180-P01.	Renewed by 445031180-P20
14-DMM-191	May 15, 2015	Construct a baghouse for Boilers B07, B09 and B11 and a dry sorbent injection system and associated processes.	Adopted by 445031180-P14
99-SDD-109-R1-P20	To be determined	Revision of 99-SDD-109-R1 to change emissions testing requirements for Boilers B09 and B11	Adopted by 445031180-P20
445031180-P14	January 26, 2016	Revision of 445031180-P12 to incorporate Boiler MACT (Subpart DDDDD) compliance extension.	Renewed by 445031180-P20
445031180-P20	July 19, 2016	Title V renewal for the total facility.	Adopted by 445031180-P21
14-DMM-191-R1	November 7, 2016	Incorporation of EPA Administrative Consent Order EPA-5-16-113(a)-WI-01	Adopted by 445031180-P21
445031180-P21	January 12, 2017	Title V revision for the total facility.	

1 - Total Facility refers to all existing units at the facility at the time of issuance of the permit listed.

Stack and Process Index.

Significant Emissions Units

Permit Table	Source Description[5]	Installed, Modified Date
	POWER AND PACKAGE BOILERS	
A	S07, B07, C01, C02 204 million BTU per hour, Wood waste/No. 6 oil/paper pellets/sludge-fired Stoker Power Boiler No. 7. Controlled by multi-clone C01 (1991) and scrubber C02 (Ducon 1976, June, 2003 – nozzle removed). **Current operation permit.** The conditions in this Table A apply before the dry sorbent injection system C7911DSI is constructed and operational.	1963
A'	S07, B07, C01, C02 204 million BTU per hour, Wood waste/No. 6 oil/paper pellets/sludge-fired Stoker Power Boiler No. 7. Controlled by multi-clone C01 (1991) and scrubber C02 (Ducon 1976, June, 2003 – nozzle removed). **Permit 14-DMM-191.** The conditions in this Table A' apply after the dry sorbent injection system C7911DSI is constructed and operational.	2016
B	S09, B09, C06, C07 192.4 million BTU per hour, Pet. Coke/coal/other-fired Single Cyclone Power Boiler No. 9. Controlled by multi-clone C06 (1974) and electrostatic precipitator (ESP) C07 (C-E Walther Inc., single stage, 2 field, 1976). S09 equipped with continuous emission monitors for $S0_2$ and opacity. **Current operation permit.** The conditions in this Table B apply before the dry sorbent injection system C7911DSI is constructed and operational.	1957
B	S09, B11, C11, C07 379.0 million BTU per hour, Pet. Coke/coal/other-fired/non condensible gases (NCG) Twin Cyclone Power Boiler No. 11. Controlled by multiclone C11 (1974) and ESP C07. **Current operation permit.** The conditions in this Table B apply before the dry sorbent injection system C7911DSI is constructed and operational.	1999
B'	Stacks S09, S09Bypass, Boiler B09, Control Devices C06, C07, C7911, C7911DSI: 192.4 million BTU per hour Single Cyclone Power Boiler No 9. Controlled by multiclone C06 (1974), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015). **Permit 14-DMM-191.** The conditions in this Table B' apply after the dry sorbent injection system C7911DSI is constructed and	2016

[5] Process production rates listed in this column are for informational purposes only and do not imply a limitation on production.

Permit Table	Source Description[5]	Installed, Modified Date
	operational.	
B'	Stack S09, S11Bypass, Boiler B11, Control Devices C11, C07, C7911, C7911DSI: 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Controlled by multiclone C11 (1974), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015). **Permit 14-DMM-191.** The conditions in this Table B' apply after the dry sorbent injection system C7911DSI is constructed and operational.	2016
C	S81, B81 96.7 million BTU per hour, 75, 000 pounds per hour (lb/hr) steam at 350 psig, natural gas-fired, Nebraska Boiler Company package temporary boiler.	1999 (rental unit)
	CHEMICAL RECOVERY OPERATIONS	
D	B08 S08 and S10 C03 and C04 206.3 million BTU per hour, 75 gallons per minute (gpm) kraft liquor/No. 6 oil/natural gas-fired, No. 8 Non-direct contact evaporator (NDCE) Recovery Boiler. Combined exhaust from B08 and B10 is split, and controlled by 2 electrostatic precipitators (ESPs): the A-Side, C04 (Environmental Elements 1988), and the B-Side, C03 (Environmental Elements 1984). Exhaust from C03 to S08. Exhaust from C04 to S10.	1953
D	B10 S08 and S10 C03 and C04 321.7 million BTU per hour, 115 gpm kraft liquor/natural gas-fired, No. 10 NDCE Recovery Boiler.	1961
E	S05, P08, C05 The No. 8 smelt dissolving tank makes green liquor from molten black liquor solids (smelt from recovery boiler B08) and weak wash. P08 is controlled by scrubber C05 (1975).	1953
E	S06, P10, C10 The No. 10 smelt dissolving tank makes green liquor from molten black liquor solids (smelt from recovery boiler B10) and weak wash. P10 is controlled by scrubber C10 (1975).	1961
F	S12, P12, C13 45 million BTU per hour rotary Lime Kiln rated at 135 tons per day lime output, and main Low Volume High Concentration (LVHC) NCG control device. Exhaust is controlled by a cyclone C13a (1998) and wet scrubber C13. C13 is equipped with 7 Ahlstrom nozzles (installed 1986, 1993) and 4 Turbotak fine nozzles (installed 1997). C13 is operated with weak wash (pH 8-9). S12 is equipped with CEMs for TRS and SO_2.	1986
G	S19, P19, C20 7.125 ton per hour (TPH) Calcium Oxide feed Lime Slaker with causticizing tanks. Exhaust is controlled by spray chamber C20 (Enso-Gutle IT Model 500 installed 1986).	1986
	PULPING OPERATIONS	
H	S17, P17 600 ADTP/day Digester, Evaporator, Turpentine Condenser NCG System Digester/evaporator/turpentine condenser non-condensible gas collection system.	1988 – digester 1991 –NCG system < 1972 –evaporator
I	S20, P20 600 ADTP/day Brown Stock Washer System	1985
I	Stack S21 P21 Screening and cleaning system.	1984
I	S22, P22 Unbleached Pulp Dewatering and Storage System	1984
J	(Reserved)	---
	PAPERMAKING OPERATIONS	
K	S11, P11 6.7 TPH No. 11 Paper Machine (Beloit Corp.) with size press.	2010
K	S13, P13 9.5 TPH No. 13 Paper Machine (Beloit Corp.) with size press (Valmet Co.), IR Yankee (natural gas-fired) after-dryer.	2010
K	S14, P14 6.5 TPH Paper by No. 14 Paper Machine (Beloit Corp) with size press (Beloit Corp.) and Yankee after-dryer.	2010
K	S15, P15 13 TPH No. 15 Paper Machine with size press (Valmet Corp.) and 1-IR after-dryer (Beloit Corp).	2010
K	S16, P16 7.4 TPH No. 12 Paper Machine with 1-IR dryer (Black and Clawson Co.) and no coaters.	2010
	MISCELLANEOUS OPERATIONS	
L	S45, P45 848,000 tons chips per year Log Storage, Chipping, Screening, Conveying System	1987
L	S49, P49 Mill-wide Haul Roads	1883

Permit Table	Source Description[5]	Installed, Modified Date
L	S50, P50 Red Hills Industrial Landfill with passive gas collection, phase V start	1990
M	Emergency Generators constructed before June 12, 2006: G1 – 55 HP, spark ignition, natural gas-fired, installed 1984 G2 – 18 HP, spark ignition, natural gas-fired, installed 1983 G3 – 107 HP, compression ignition, #2 oil-fired, installed 1971 G4 – 40 HP, spark ignition, natural gas-fired, installed 1999 G4A – 42 HP, spark ignition, natural gas-fired, installed 2003 G6 – 40 HP, spark ignition, natural gas-fired, installed 2005 G7 – 42 HP, spark ignition, natural gas-fired, installed 1989 G8 – 42 HP, spark ignition, natural gas-fired, installed 1989 G9 – 59 HP, spark ignition, natural gas-fired, installed 1985 G10 – 27 HP, spark ignition, natural gas-fired, installed 1975 G11 – 525 HP, spark ignition, natural gas-fired, installed 1975 G13 – 42 HP, spark ignition, natural gas-fired, installed 1989 G14 – 210 HP, spark ignition, natural gas-fired, installed 1982 G17 – 30 HP, spark ignition, natural gas-fired, installed 1986 G18 – 30 HP, spark ignition, natural gas-fired, installed 1986	1975 - 2006
N	Emergency Generators constructed on or after June 12, 2006: G5, G12, G15, G16	after 7/1/2006
O	S501, P501, C501: Dry Sorbent Injection (DSI) Storage Silo Bin Vent S502A, S502B, P502, C502[6]: Ash Storage Silo Load-In Baghouse S503, P503, C503: Ash Storage Silo Bin Vent	2015
P	S504, F504: Ash storage silo load-out to trucks S505, F505: Sorbent delivery truck traffic S506, F506: Sorbent ash production truck traffic	2015
Q	S39, P39: 25 MGD Wastewater treatment and collection system	Unknown
R	F01: Coal/Petroleum Coke Storage and Transfer Operations	Unknown

The following processes have significant emissions of one or more pollutant. However, there are no specific applicable emission limitations for the pollutants with significant levels of emissions. Therefore, this operation permit does not contain a separate table of requirements for these processes. Instead, these processes are covered by the general limitations in Part II of the operation permit.

Source Description	Installed, Modified Date
PULPING OPERATIONS	
S26, P26 Black liquor collection and storage system.	1940 to 1991 1991 for 46% intermediate and 65% heavy liquor tanks
S27, P27 Turpentine storage tank (95 m^3 capacity) and transfer operation.	1991

Insignificant Emissions Units.

Maintenance of Grounds, Equipment, and Buildings
Fuel Oil Storage Tanks (< 10,000 gal)
Demineralization and Oxygen Scavenging of Water for Boilers
Purging of Natural Gas Lines
Boiler, Turbine, and HVAC System Maintenance
Pollution Control Equipment Maintenance

[6] Process P502 and Control Device C502 both represent a baghouse used to pull ash and load it into the ash silo. The baghouse is both the process and the control device.

Internal Combustion Engines Used for Warehouse and Material Transfer
Fire Control Equipment
Janitorial Services
Office Activities
Convenience Water Heating
Convenience Space Heating (< 5 mil BTU/hr)
Sanitary Sewer and Plumbing Venting
Cooling Towers
Chillers
No. 6 Fuel Oil Tank
Hog Fuel Handling System
Secondary Fiber Supply System
Salt Cake Unloading System
Lime Unloading, Handling & Storage System
Salt Cake Mix Tank When Exhausted to Atmosphere
Black Liquor Dust Tank Exhaust
Pilot Digester
Coating Kitchen: Aqueous Ammonia Storage & Exhaust Starch Unloading System
10/12 Color Rooms-Exhaust Hood
Stock Prep-Starch & Clay Unloading & Mixing
No. 15 Paper Machine Roll Grinder
Clay Coating Boilout
Paper Machine Wire Repair
Paper Conveying System
Causticizing system grouping (units after the smelt tanks to the Lime kiln not including the slaker).
Water treatment plant (incoming process water)
Laboratories, lower mill
Temporary stockpiles of contaminated soil (potential source)

Permit Shield. Unless precluded by the Administrator of the US EPA, compliance with all emission limitations in this operation permit is considered to be compliance with all emission limitations established under ss. 285.01 to 285.87, Wis. Stats., and emission limitations under the federal clean air act, that are applicable to the source if the permit includes the applicable limitation or if the Department determines that the emission limitations do not apply.

The following emission limitations were reviewed in the analysis and preliminary determination and were determined not to apply to this stationary source:

1. s. NR 440.285, Wis. Adm. Code does not apply to P19, because the slaker/causticizing tanks are process tanks as defined in s. NR 440.285(2)(hm), Wis. Adm. Code. Therefore, they are not storage vessels, per the definition in s. NR 440.285(2)(j), Wis. Adm. Code. The relevant definitions are as follows:

> s. NR 440.285(2)(hm): "Process tank" means a tank that is used within a process, including a solvent or raw material recovery process, to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.
>
> s. NR 440.285(2)(j): "Storage vessel" means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include any of the following:
> . . .

3. Process tanks.

2. s. NR 440.285, Wis. Adm. Code does not apply to P26 because of the 17 black liquor tanks, 14 tanks were installed prior to NSPS and NSR dates, and not reconstructed or modified after those dates, 2 tanks have vapor pressures less than 3.5 kPa, and 1 tank functions as a process tank not a storage vessel.

3. s. NR 440.285, Wis. Adm. Code does not apply to P27 because the capacity of the turpentine tanks is greater than 75 m^3 and less than 151 m^3 with a maximum true vapor pressure less than 15.0 kPa (s. NR 440.285(1)(b), Wis. Adm. Code).

Title I Conditions. The Wisconsin Department of Natural Resource issues Air Pollution Control Operation Permits for sources of air pollution, as required by chapter NR 407, Wis. Adm. Code, and Title V of the Clean Air Act (Act). In addition to implementing the operation permit program, operation permits usually contain "Title I Conditions", i.e., conditions established under the permit programs for new and modified emission units, pursuant to chapters NR 405, 406, and 408, Wis. Adm. Code, and Title I of the Act. This operation permit contains Title I conditions in sections I.A', I.B, I.B', I.C, I.F, I.K, I.O and I.P[7] that were established in previously issued permits. The specific conditions in this operation permit that were established under Title I of the Act are identified by citation to the Title I permit number. Conditions that originated as Title I conditions may only be revised through appropriate Title I actions. Conditions revised concurrently with a revision or renewal of an operation permit are identified by citation to the original Title I permit number and are appended with the last three digits of operation permit number. For example: citation of 95-JB-062-P10 would indicate that that condition, which originated from construction permit # 95-JB-062, was revised and the analysis for the revision is included with the review documents for operation permit 123456780-P10.

Part I - The headings for the columns in the permit are defined below. The legal authority for the limitations or methods follows them in [brackets].

Limitations - This column lists all applicable emission limitations that apply to the source, including case-by-case limitations such as Latest Available Control Techniques (LACT), Best Available Control Technology (BACT), or Lowest Achievable Emission Rate (LAER). It also lists any voluntary restrictions on hours of operation, raw material use, or production rate requested by the permittee to limit potential to emit.

Compliance Demonstration - The compliance demonstration methods outlined in this column may be used to demonstrate compliance with the associated emission limit or work practice standard listed under the corresponding **Limitations** column. The compliance demonstration column contains limits on parameters or other mechanisms that must be monitored periodically to ensure compliance with the limitations. The requirement to test as well as initial and periodic test schedules, if testing is required, are stated here. Notwithstanding the compliance determination methods which the owner or operator of a sources is authorized to use under ch. NR 439, Wis. Adm. Code, the Department may use any relevant information or appropriate method to determine a source's compliance with applicable emission limitations.

Reference Test Methods, Recordkeeping, and Monitoring Requirements - Specific US EPA Reference test methods or other approved test methods are contained in this column and are the methods that must be used whenever testing is required. A reference test method is listed even if no testing is immediately required. Also included in this column are any recordkeeping requirements, their frequency, and reporting requirements. Accuracy of monitoring equipment shall meet, at a minimum, the requirements of s. NR 439.055(3) and (4), Wis. Adm. Code, as specified in Part II of this permit.

PART II - This section contains general limitations and standard conditions that all permittees must abide by. These requirements are included in this section with every permit.

[7] Permits 86-SJK-072, 86-SJK-072A, 86-SJK-072B, 86-SJK-072C, 86-SJK-072D and 86-SJK-072-R1 are elective operation permits, not construction permits. Sections I.A and I.D contain requirements from these elective operation permits.

Part I

A. Stack S07 B07 C01 C02

204 million BTU per hour Stoker Power Boiler No. 7, fired mainly on wood waste and alternate fuels. Installed/last modified in 1963. Emissions controlled by multi-clone C01 (1991) and scrubber C02 (Ducon 1976, June, 2003 - nozzle removed). **Current Operation Permit. The conditions in this Table A apply before the dry sorbent injection system C7911DSI is constructed and operational.**

1. Pollutant: Particulate Matter/ PM_{10} Emissions

a. Limitation:

(1) Particulate matter emissions from Boiler B07 may not exceed:
(a) 0.30 pounds per million Btu heat input, and
(b) 61.2 pounds per hour.
[s. NR 415.06(1)(b), Wis. Adm. Code; established in (est. in) 445031180-P20]

(2) The permittee shall only fire:
(a) bark or wood waste as primary fuel in B07;
(b) paper pellets, natural gas, residual fuel oil, paper broke, and tire derived fuel (TDF), in B07; and
(c) Other alternate fuels allowed under Condition ZZZ.1.
[s. 285.65(3) Wis. Stats.; 86-SJK-072C and est. in 445031180-P10]

(3) PM_{10} emissions may not exceed 61.2 pounds per hour. [s. 285.65(3), Wis. Stats.; s. NR 404.08(2), Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall operate the multi-cyclone (C01) and wet scrubber (C02) at all times B07 is in operation, except when B07 is fired on only natural gas during a start-up. [s. NR 415.06(1)(b), Wis. Adm. Code; 86-SJK-072-R1] (2)(a) Before January 31, 2017, the permittee shall perform compliance emission testing for particulate matter every 24 months, as specified in Condition ZZZ.2.a.(1). (b) On and after January 31, 2017, the permittee shall perform compliance emission testing for particulate matter at the times specified in Conditions AAA.5.(a), (b) and (c). [ss. NR 439.075(2)(a)1. and (3)(b), Wis. Adm. Code; est. in 445031180-P20] (3) <u>Compliance Assurance Monitoring</u>: Before the dry sorbent injection system C7911DSI is constructed and operational, the permittee shall meet the following requirements: (a) Whenever Boiler B07 is in operation, except when the boiler is fired on only natural gas, the permittee shall monitor pressure drop across Control Device C02 and water flow rate to C02 as indicators of performance. The pressure drop and water flow rate shall be recorded at least 4 times per hour. (b) The indicator range for pressure drop is a minimum of 2.3 inches water column, based on a three-hour block average. Pressure drop across Control Device C02 shall be maintained at or above this value whenever Boiler B07 is in operation. (c) The indicator range for water flow rate is a minimum of 141.2 gallons per minute, based on a three-hour block average. Water flow rate to Control Device C02 shall be maintained at or above this value whenever Boiler B07 is in	(1) Whenever particulate matter emissions testing is required, the permittee shall use EPA Method 5 to test for noncondensible particulate matter, and EPA Method 202 to test for condensible particulate matter emissions. [ss. NR 407.09(1)(c)1.a. and 439.06(1), Wis. Adm. Code; est. in 445031180-P20] (2) Whenever PM_{10} emission testing is required, the permittee shall use one of the following: (a) Emissions testing results generated per Condition A.1.c.(1) above. If this option is chosen, all emissions measured by US EPA Methods 5 and 202 are assumed to be PM_{10}. (b) US EPA Method 201A, and US EPA Method 202 for condensible particulate matter. (c) Alternate methods as approved in advance by the Department. [ss. NR 439.06(1) and (1m), Wis. Adm. Code; est. in 445031180-P20] (3) The permittee shall keep monthly records of: (a) The type of each fuel fired in the boiler [86-SJK-072A]; and (b) The amount of each fuel fired in the boiler [86-SJK-072A]. (c) Amounts of fuels fired in each month shall be expressed in tons for solid fuels, in gallons for liquid fuels, and in cubic feet for gaseous fuels. [est. in 445031180-P20] [s. NR 439.04(1)(d), Wis. Adm. Code] (4) The permittee shall keep records of:

A. Stack S07 B07 C01 C02

204 million BTU per hour Stoker Power Boiler No. 7, fired mainly on wood waste and alternate fuels. Installed/last modified in 1963. Emissions controlled by multi-clone C01 (1991) and scrubber C02 (Ducon 1976, June, 2003 - nozzle removed). **Current Operation Permit. The conditions in this Table A apply before the dry sorbent injection system C7911DSI is constructed and operational.**

operation.
(d) For the purpose of defining an excursion, the permittee shall calculate three-hour arithmetic averages of pressure drop and water flow rate. An excursion for pressure drop or water flow rate is any three-hour block average less than the applicable minimum value.
(e) The quality improvement plan (QIP) threshold is five excursions in a six-month period.
(f) The permittee shall operate the pressure drop monitoring and water flow rate monitoring in accordance with 40 CFR ss. 64.7 and 64.8 as detailed in Conditions ZZZ.10.a.(1) and (2).
[s. 285.65(13), Wis. Stats., and 40 CFR ss. 64.3(a) and (d), 64.6(c)(2) and (3), 64.7(c) and 64.8(a); est. in 445031180-P20]

(4) The permittee shall perform periodic inspections of the scrubber to ensure that the control equipment is operating properly. The time interval between inspections may not exceed eighteen (18) months. The periodic inspections shall include, but not be limited to inspections and repair or maintenance as necessary, of:
(a) the baffle for bowing and sloping;
(b) the shower nozzle for plugging; and
(c) all seals and ducts for leakage.
[s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P01]

(5) The permittee shall perform periodic inspections of the multi-cyclone to ensure that the control equipment is operating properly. The time interval between inspections may not exceed eighteen (18) months. The periodic inspections shall include, but not be limited to inspections and repair or maintenance as necessary, of:
(a) cyclone tubes and side walls of hopper area for plugging and erosion;
(b) gaskets on the clean side tube sheet and high temperature gaskets;
(c) axial inlet spinner vanes for erosion; and
(d) solid discharge valve for erosion.
[s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P01]

(6) The permittee shall perform an inspection of the multi-cyclone hoppers for pluggage and unplug if necessary at least once per shift while the boiler is operating, except when the boiler is fired on only natural gas. [ss. NR 407.09(4)(a) and NR 439.055(5), Wis. Adm. Code; est. in 445031180-P20]

(a) The date of each internal inspection of the control equipment;
(b) A list of the items inspected; and
(c) Any maintenance or repairs performed as a result of these inspections.
[s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P10]

(5)(a) The permittee shall monitor the pressure drop across the multi-cyclone in inches of water, when the device is in operation.
(b) The permittee shall keep records of the pressure drop across the multiclone once every 8 hours of source operation or once per day, whichever yields the greater number of measurements.
[ss. NR 439.055(1)(b) and (2)(b)1., Wis. Adm. Code; est. in 445031180-P20]

(6) The permittee shall keep the following:
(a) a log indicating that the multi-cyclone hoppers were inspected at least once per shift while the boiler was operating on fuels other than natural gas;
(b) dated records of any maintenance or repairs performed as a result of the hopper inspection.
[s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

(7) Compliance Assurance Monitoring (CAM):
(a) The semiannual monitoring report required by Condition ZZZ.3.a.(2) shall include a description of the actions, if any, taken to implement a QIP during the reporting period as specified in 40 CFR s. 64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.
(b) The permittee shall keep the records outlined in Condition ZZZ.10.a.(3), which include records of monitoring data, monitor performance data, and corrective actions taken.
[s. NR 439.055(2)(b), Wis. Adm. Code; 40 CFR ss. 64.6(c)(3) and 64.9; est. in 445031180-P20]

(8) The permittee shall keep records of date, time, and fuels in use during any period when Boiler B07 is operating uncontrolled. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

(9) Whenever wet scrubber Control Device C02 is in operation, the permittee shall keep the following records:
(a) Records of the three-hour block average pressure drop across Control Device C02.
(b) Records of the three-hour block average water flow rates to Control Device C02.
[s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-

A. Stack S07 B07 C01 C02

204 million BTU per hour Stoker Power Boiler No. 7, fired mainly on wood waste and alternate fuels. Installed/last modified in 1963. Emissions controlled by multi-clone C01 (1991) and scrubber C02 (Ducon 1976, June, 2003 - nozzle removed). **Current Operation Permit. The conditions in this Table A apply before the dry sorbent injection system C7911DSI is constructed and operational.**

	P20]

2. Pollutant: Visible Emissions

a. Limitation:

(1) 20% Opacity [s. NR 431.04(2), Wis. Adm. Code; 86-SJK-072]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) See Conditions A.1.b.(1), (3), (4), (5) and (6). [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever compliance emission testing is required, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code; est. in 445031180-P01] (2) See Conditions A.1.c.(3)-(8) for particulate matter emissions. [ss. NR 439.04(1)(d) and 439.055(1), (2) and (5), Wis. Adm. Code; est. in 445031180-P20]

3. Pollutant: Sulfur Dioxide

a. Limitation:

(1) 92.7 pounds per hour averaged over any consecutive 24 hours. [s. NR 417.07(5)(b), Wis. Adm. Code; #86-SJK-072]

(2) The sulfur content of residual fuel oil may not exceed 2.5 percent by weight. [s. NR 417.07(5), Wis. Adm. Code; 86-SJK-072]

(3)(a) The permittee may not burn more than 5660 gallons of residual fuel oil in any day.
(b) Tire-derived fuel may not be burned on any day that residual fuel oil is burned.
[s. NR 417.07(5)(b), Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) The permittee shall calculate and record the daily average sulfur dioxide emission rate in units of pounds per hour. The average hourly boiler sulfur dioxide emissions shall be calculated by dividing total sulfur dioxide emissions for each day by the hours of boiler operation for that day. These records shall be kept available for inspection by the Department upon request. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code; est. in 445031180-P01] (2) The permittee shall keep the records required in Condition A.3.c.(3). [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever compliance emission testing is required for Sulfur Dioxide Emissions, the permittee shall use US EPA Method 6, 6A, 6B or 6C, or an alternate method approved in writing by the Department. [s. NR 439.06(2)(a), Wis. Adm. Code; est. in 445031180-P20] (2) See testing, reporting, and recordkeeping requirements for residual oil in Condition ZZZ.5. [s. NR 417.07(7)(a)4., Wis. Adm. Code; est. in 445031180-P10] (3) The permittee shall keep records of the following for each day that Boiler B07 operates: (a) The SO_2 emission factor for each fuel burned, in units of pounds SO_2 per pound of fuel for solid fuels, pounds of SO_2 per gallon of fuel for liquid fuels, and pounds of SO_2 per cubic foot of fuel for gaseous fuels. See Condition A.3.c.(4) for emission factor requirements. (b) The quantity of each fuel burned, in units of pounds for solid fuels, gallons for liquid fuels, and cubic feet for gaseous fuels. (c) If the emission factor for a particular fuel depends on the sulfur content of the fuel, the weight percent sulfur content of the fuel. (d) The total sulfur dioxide emissions from all fuels burned, in pounds. Total daily SO_2 emissions shall be determined as follows: (i) Multiply the daily quantity of each fuel burned by the appropriate emission factor.

A. Stack S07 B07 C01 C02

204 million BTU per hour Stoker Power Boiler No. 7, fired mainly on wood waste and alternate fuels. Installed/last modified in 1963. Emissions controlled by multi-clone C01 (1991) and scrubber C02 (Ducon 1976, June, 2003 - nozzle removed). **Current Operation Permit. The conditions in this Table A apply before the dry sorbent injection system C7911DSI is constructed and operational.**

(ii) Sum the daily SO_2 emissions from each individual fuel burned.
(e) The average hourly sulfur dioxide emissions, in pounds per hour, determined by dividing total sulfur dioxide emissions by total hours of operation.
(f) The total gallons of residual fuel oil burned.
[s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

(4) The permittee shall obtain SO_2 emission factors for Condition A.3.c.(3)(a) from one of the following sources:
(a) Conduct SO_2 emissions testing using one of the test methods in Condition A.3.c.(1) and the following test conditions:
(i) During emissions testing, burn only one type of fuel.
(ii) During emissions testing, record the fuel usage rate, in pounds per hour for solid fuels, gallons per hour for liquid fuels, and cubic feet for gaseous fuels.
(iii) Determine the emission factor by dividing the sulfur dioxide emission rate during testing, in pounds per hour, by the fuel usage rate during testing, in pounds, gallons, or cubic feet per hour, as appropriate.
(b) Use AP-42 emission factors.[8]
(i) The SO_2 emission factor for bark/wood waste shall be developed using AP-42, Table 1.6-2.
(ii) The SO_2 emission factor for natural gas shall be taken from AP-42, Table 1.4-2.
(iii) The SO_2 emission factor for residual fuel oil shall be developed using AP-42, Table 1.3-1.
(c) Use other studies or reports if approved by the Department.
(d) The permittee shall keep on file the emissions test reports, fuel analyses, calculations and/or other records or information used to develop the emission factors.
[ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

4. Pollutant: NR 445 Hazardous Air Pollutant Emissions: Nickel and Formaldehyde

a. Limitations:

(1) * Before January 31, 2017, the permittee shall control emissions with Best Available Control Technology (BACT) for nickel. BACT shall consist of Current Operating Practices, defined as the following:
(a) Maintain temperatures above the boiler grate at 1400 to 1950 °F,
(b) Provide a 2.2 second residence time at 1400 to 1950 °F,
(c) Operate C01 and C02 whenever the boiler operates.
(d) BACT does not apply during periods of boiler startup, shutdown or malfunction.
[s. NR *445.07(1)(c), Wis. Adm. Code; est. in 445031180-P20]

(2) * Before January 31, 2017, BACT for formaldehyde shall consist of Current Operating Practices defined under condition A.4.a.(1). [s. NR *445.07(1)(c), Wis. Adm. Code; est. in 445031180-P20]

(3) * Conditions A.4.a.(1) and (2) do not apply on and after January 31, 2017. [s. NR *445.01(1)(b), Wis. Adm. Code; est. in 445031180-P20][9]

[8] AP-42 is the Compilation of Air Pollutant Emission Factors, available at the website https://www3.epa.gov/ttn/chief/ap42/index.html

[9] Per s. NR 445.01(1)(b), Wis. Adm. Code, NR 445 requirements do not apply to pollutants that are regulated by a NESHAP. On and after January 31, 2017, this boiler

A. Stack S07 B07 C01 C02

204 million BTU per hour Stoker Power Boiler No. 7, fired mainly on wood waste and alternate fuels. Installed/last modified in 1963. Emissions controlled by multi-clone C01 (1991) and scrubber C02 (Ducon 1976, June, 2003 - nozzle removed). **Current Operation Permit. The conditions in this Table A apply before the dry sorbent injection system C7911DSI is constructed and operational.**

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) *Before January 31, 2017, the permittee shall demonstrate compliance with condition A.4.a.(1)(a) to (c) through flue gas temperature and residence time analysis whenever requested by the Department. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P20] (2) *Before January 31, 2017, the permittee shall demonstrate compliance through control equipment operation, maintenance, and inspection requirements as stated in the particulate matter emission limitation section for this source. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P20]	(1) *Before, January 31, 2017, the permittee shall maintain current documentation demonstrating flue gas temperature and residence time analysis. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20] (2) *Before January 31, 2017, the permittee shall keep records of any maintenance or repairs performed as a result of the inspections and maintenance checks. The permittee shall record the date of the maintenance or repairs. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20] (3) * Whenever stack testing is requested, the permittee shall use test methods approved by the Department. [s. NR 439.06(8), Wis. Adm. Code; est. in 445031180-P10]

5. Pollutant: Alternate Fuel Use Emissions

a. Limitation:

(1) Tire-derived fuel (TDF) may not supply more than 10 percent of the heat input to the boiler or the highest heat input that demonstrates compliance with the emission limit of Condition A.1.a.(1), whichever is less. [ss. NR 415.06(1)(b) and NR 407.09(1)(a), Wis. Adm. Code; est. in 445031180-P10]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) When requested by the Department, the permittee shall sample and analyze fuels, other than coal and residual fuel oil, in a manner specified by the Department. [s. NR 439.085(4), Wis. Adm. Code; est. in 445031180-P01] (2) The permittee shall calculate the percentage heat input supplied to the boiler from TDF using the following calculation: $$P = \left[\frac{HC_t * Q_t}{\sum_{i=1}^{n} HC_i * Q_i} \right] * 100$$ where: P is the daily average percentage (of heat input supplied to the boiler) by TDF; HC_t is the heat content of the TDF used during the day, expressed in BTU per pound; Q_t is the amount of TDF used during the day, expressed in pounds; n is the total number of fuels fired in the boiler during the day; i represents each fuel fired during the day; HC_i is the heat content of each individual fuel fired	(1) Whenever an alternate fuel listed in Condition A.5.a.(1) is burned, the permittee shall keep the following records for each fuel co-fired: (a) The daily amount of each fuel consumed, (expressed in pounds for solid fuels, thousand gallons for liquid fuels, and million cubic feet for gaseous fuels), (b) The heat content of each fuel (expressed in BTU per pound for solid fuels, BTU per thousand gallons for liquid fuels, and BTU per million cubic feet for gaseous fuels), (c) The daily average percentage of heat input (P) that was supplied to the boiler from TDF for each day of the month. [s. NR 439.04(1)(d) and NR 407.09(1)(a), Wis. Adm. Code; est. in 445031180-P20] (2) Whenever TDF is used, the permittee shall obtain a grab sample of TDF on a monthly basis, for analysis of heat content. [s. NR 439.08(3), Wis. Adm. Code; est. in 445031180-P20] (3) The permittee shall keep records of fuel sampling and make them available to the Department upon request. [ss.

will comply with the Industrial Boiler NESHAP, 40 CFR Part 63 Subpart DDDDD. While Subpart DDDDD requires compliance by January 31, 2016, the permittee applied for and received a one-year compliance extension as allowed under 40 CFR s. 63.6(i).

A. Stack S07 B07 C01 C02
204 million BTU per hour Stoker Power Boiler No. 7, fired mainly on wood waste and alternate fuels. Installed/last modified in 1963. Emissions controlled by multi-clone C01 (1991) and scrubber C02 (Ducon 1976, June, 2003 - nozzle removed). **Current Operation Permit. The conditions in this Table A apply before the dry sorbent injection system C7911DSI is constructed and operational.**

during the day; and Q_i is the amount of each individual fuel fired during the day. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code; est. in 445031180-P20]	NR 439.04(1)(d) and NR 407.09(1)(a), Wis. Adm. Code; est. in 445031180-P10]

6. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, by 40 CFR Part 63, Subpart DDDDD: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial and Institutional Boilers and Process Heaters
These Requirements Apply on and After January 31, 2017. [40 CFR s. 63.6(i); s. NR 460.05(7), Wis. Adm. Code]

a. Limitation:
(1) On and after January 31, 2017, the permittee shall comply with ONE of the following:
(a) Hydrogen chloride (HCl) emissions may not exceed 0.022 pound per million BTU (lb per MMBtu) of heat input; OR
(b) HCl emissions may not exceed 0.025 lb per MMBtu of steam output; OR
(c) HCl emissions may not exceed 0.27 pounds per megawatt-hour (lb per MWh).
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR ss. 63.6(i) and 63.7500(a)(1); est. in 445031180-P20]

(2) On and after January 31, 2017, the permittee shall comply with ONE of the following:
(a) Mercury emissions may not exceed 5.7×10^{-6} lb per MMBtu of heat input; OR
(b) Mercury emissions may not exceed 6.4×10^{-6} lb per MMBtu of steam output; OR
(c) Mercury emissions may not exceed 7.3×10^{-5} lb per MWh.
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR ss. 63.6(i) and 63.7500(a)(1); est. in 445031180-P20]

(3) On and after January 31, 2017, the permittee shall comply with ONE of the following:
(a) Carbon monoxide emissions may not exceed 1,500 parts per million by volume on a dry basis corrected to 3 percent oxygen (ppmdv at 3% O_2), based on a three-run average; OR
(b) If a carbon monoxide continuous emission monitoring system (CO CEMS) is used, carbon monoxide emissions may not exceed 720 ppmdv at 3% O_2, based on a 30-day rolling average; OR
(c) Carbon monoxide emissions may not exceed 1.4 lb per MMBtu of steam output, based on a three-run average; OR
(d) Carbon monoxide emissions may not exceed 17 lb per MWh, based on a three-run average.
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR ss. 63.6(i) and 63.7500(a)(1); est. in 445031180-P20]

(4) On and after January 31, 2017, the permittee shall comply with ONE of the following:
(a) Filterable particulate matter (PM) emissions may not exceed 0.037 lb per MMBtu of heat input; OR
(b) Total selected metals (TSM) emissions may not exceed 0.00024 lb per MMBtu of heat input; OR
(c) Filterable PM emissions may not exceed 0.043 lb per MMBtu of steam output; OR
(d) Filterable PM emissions may not exceed 0.52 lb per MWh; OR
(e) TSM emissions may not exceed 2.8×10^{-4} lb per MMBtu of steam output; OR
(f) TSM emissions may not exceed 3.4×10^{-4} lb per MWh.
(g) Total selected metals (TSM) means the sum of the following metallic hazardous air pollutants: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR ss. 63.6(i), 63.7500(a)(1) and 63.7575; est. in 445031180-P20]

A. Stack S07 B07 C01 C02 204 million BTU per hour Stoker Power Boiler No. 7, fired mainly on wood waste and alternate fuels. Installed/last modified in 1963. Emissions controlled by multi-clone C01 (1991) and scrubber C02 (Ducon 1976, June, 2003 - nozzle removed). **Current Operation Permit. The conditions in this Table A apply before the dry sorbent injection system C7911DSI is constructed and operational.**	
(5) The permittee may use emissions averaging, contained in sections AAA.8. and 14., energy efficiency credits contained in section AAA.14 and output based limits per section AAA.1, to meet the PM (or TSM), HCl, and mercury limits. [40 CFR ss. 63.7522 and 63.7541; est. in 445031180-P20]	
b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) See applicable compliance demonstration methods in Table AAA. [s. 285.65(13), Wis. Stats.; 40 CFR Part 63, Subpart DDDDD; est. in 445031180-P20]	(1) See applicable test methods, recordkeeping requirements and monitoring requirements in Table AAA. [s. 285.65(13), Wis. Stats.; 40 CFR Part 63, Subpart DDDDD; est. in 445031180-P20]

A'. Stacks S07, S09, Boiler B07, Control Devices C01, C02, C07, C7911, C7911DSI:
204 million BTU per hour Stoker Power Boiler No. 7, installed/last modified in 1963. Controlled by multiclone C01 (1991), wet scrubber C02 (1976, modified in 2003), ESP C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015). **Construction Permit 14-DMM-191. The conditions in this Table A' apply after the dry sorbent injection system C7911DSI is constructed and operational.**

1. Pollutant: Particulate Matter/PM_{10}/$PM_{2.5}$ Emissions

a. Limitation:
(1) Particulate matter emissions from boiler B07 may not exceed:
(a) 0.15 pounds per million Btu heat input; and
(b) 30.6 pounds per hour.
[s. NR 415.06(2)(a), Wis. Adm. Code, and s. 285.65(7), Wis. Stats.; 14-DMM-191]

(2) PM_{10} and $PM_{2.5}$ emissions from boiler B07 may not exceed 30.6 pounds per hour. [ss. NR 404.04(8) and (9), and NR 404.05(3)(a), Wis. Adm. Code, and s. 285.65(3), Wis. Stats.; 14-DMM-191]

(3) The permittee shall only fire:
(a) Bark or wood waste as primary fuel in boiler B07;
(b) Paper pellets, natural gas, residual fuel oil, paper broke, and tire derived fuel (TDF), as alternate fuels in boiler B07; and
(c) Other alternate fuels allowed under Condition ZZZ.1.
[s. 285.65(3) Wis. Stats.; 86-SJK-072C and est. in 445031180-P10]

(4) The permittee may not inject sorbent into the boiler flue gas unless emissions from the boiler are controlled by baghouse C7911. [s. 285.65(3), Wis. Stats.; 14-DMM-191]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) <u>Before January 31, 2017:</u> (a) At all times that boiler B07 is in operation, except when the boiler is fired on only natural gas, the permittee shall control emissions from the boiler using multiclone C01 and one of the following: i. Wet scrubber C02; ii. Baghouse C7911 and ESP C07; or iii. Baghouse C7911 (b) When boiler B07 is fired on only natural gas, bypass stack S07 may be used. [s. 285.65(3), Wis. Stats.; 14-DMM-191] (2) <u>On and after January 31, 2017:</u> (a) At all times that boiler B07 is in operation, except when the boiler is fired on only natural gas, the permittee shall operate multiclone C01 and baghouse C7911 to control emissions from the boiler. (b) When boiler B07 is fired on only natural gas, bypass stack S07 may be used. [s. 285.65(3), Wis. Stats.; 14-DMM-191] (3)(a) Before January 31, 2017, the permittee shall perform compliance emission testing for particulate matter every 24 months, as specified in Condition ZZZ.2.a.(1). (b) On and after January 31, 2017, the permittee shall perform compliance emission testing for particulate matter at the times specified in	(1) Whenever particulate matter emissions testing is required, the permittee shall use EPA Method 5 to test for filterable particulate matter and EPA Method 202 to test for condensible particulate matter emissions, or an alternate method approved in writing by the Department. [ss. NR 407.09(1)(c)1.a. and NR 439.06(1), Wis. Adm. Code; 14-DMM-191] (2) Whenever compliance emission testing is required, the permittee shall use EPA Test Method 201A for filterable and EPA Method 202 for condensible particulate, or an alternate method approved in writing by the Department. [s. NR 439.06(8), Wis. Adm. Code; 14-DMM-191] (3) The permittee shall keep monthly records of: (a) The type of each fuel fired in the boiler [86-SJK-072A]; and (b) The amount of each fuel fired in the boiler [86-SJK-072A]. (c) Amounts of fuels fired in each month shall be expressed in tons for solid fuels, in gallons for liquid fuels, and in cubic feet for gaseous fuels. [est. in 445031180-P20] [s. NR 439.04(1)(d), Wis. Adm. Code] (4) The permittee shall keep records of: (a) The date of each internal inspection of the control equipment; (b) A list of the items inspected; and (c) Any maintenance or repairs performed as a result of these inspections. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P10]

A'. Stacks S07, S09, Boiler B07, Control Devices C01, C02, C07, C7911, C7911DSI:
204 million BTU per hour Stoker Power Boiler No. 7, installed/last modified in 1963. Controlled by multiclone C01 (1991), wet scrubber C02 (1976, modified in 2003), ESP C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Construction Permit 14-DMM-191. The conditions in this Table A' apply after the dry sorbent injection system C7911DSI is constructed and operational.

Conditions AAA.5.(a), (b) and (c).
[ss. NR 439.075(2)(a)1. and (3)(b), Wis. Adm. Code; est. in 445031180-P20]

(4) The permittee shall perform periodic inspections of the multiclone to ensure that the control equipment is operating properly. The time interval between inspections may not exceed eighteen (18) months. The periodic inspections shall include, but not be limited to inspections and repair or maintenance as necessary, of:
(a) Cyclone tubes and side walls of hopper area for plugging and erosion;
(b) Gaskets on the clean side tube sheet and high temperature gaskets;
(c) Axial inlet spinner vanes for erosion; and
(d) Solid discharge valve for erosion.
[s. 285.65(3), Wis. Stats.; est. in 445031180-P01]

(5) The permittee shall perform an inspection of the multiclone hoppers for pluggage and unplug if necessary at least once per shift while the boiler is operating, except when the boiler is fired on only natural gas. [s. NR 439.055(5), Wis. Adm. Code, and s. 285.65(3), Wis. Stats.; est. in 445031180-P20]

(6) The permittee shall perform periodic inspections of the baghouse as recommended by the manufacturer to ensure that the control equipment is operating properly. [s. 285.65(3), Wis. Stats.; 14-DMM-191]

(7) Before January 31, 2017, the permittee shall meet the compliance demonstrations in Section A'.7.a. [s. 285.65(3), Wis. Stats.; 14-DMM-191]

(8) On and after January 31, 2017, the permittee shall meet the applicable compliance demonstration methods in Table AAA. [s. 285.65(13), Wis. Stats.; 40 CFR Part 63, Subpart DDDDD; 14-DMM-191]

(5) The permittee shall monitor the pressure drop across the multiclone when the device is in operation. [s. NR 439.055(1)(b), Wis. Adm. Code; 14-DMM-191]

(6) The permittee shall keep records of the pressure drop across the multiclone once every 8 hours of source operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055(2)(b)1., Wis. Adm. Code; 14-DMM-191]

(7) The permittee shall keep the following:
(a) A log indicating that the multiclone hoppers were inspected at least once per shift while the boiler was operating on fuels other than natural gas;
(b) Dated records of any maintenance or repairs performed as a result of the hopper inspections.
[s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

(8) When the bypass stack is used, the permittee shall keep records of:
(a) The type and amount of fuel fired in the boiler while exhausting to the bypass stack; and
(b) The date and times the bypass stack was used.
[s. NR 439.04(1)(d), Wis. Adm. Cod; 14-DMM-191]

(9) Before January 31, 2017, the permittee shall comply with monitoring and recordkeeping requirements in Section A'.7.b. [s. 285.65(3), Wis. Stats.; 14-DMM-191]

(10) On and after January 31, 2017, the permittee shall comply with the applicable monitoring and recordkeeping requirements in Table AAA. [s. 285.65(13), Wis. Stats.; 40 CFR Part 63, Subpart DDDDD; 14-DMM-191]

(11) The permittee shall keep records of date, time, and fuels in use during any period when Boiler B07 is operating uncontrolled. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

2. Pollutant: Visible Emissions

a. Limitation:
(1) 20% Opacity. The exceptions under s. NR 431.05, Wis. Adm. Code, do apply. [s. NR 431.05, Wis. Adm. Code; 14-DMM-191]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The compliance demonstration methods in Section A'.1.b shall serve as the compliance demonstration	(1) Whenever compliance emission testing is required, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code;

A'. Stacks S07, S09, Boiler B07, Control Devices C01, C02, C07, C7911, C7911DSI:
204 million BTU per hour Stoker Power Boiler No. 7, installed/last modified in 1963. Controlled by multiclone C01 (1991), wet scrubber C02 (1976, modified in 2003), ESP C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Construction Permit 14-DMM-191. The conditions in this Table A' apply after the dry sorbent injection system C7911DSI is constructed and operational.

methods for visible emissions. [s. 285.65(3), Wis. Stats.; 14-DMM-191]	est. in 445031180-P01] (2) The monitoring and recordkeeping requirements in A'.1.c. shall serve as the monitoring and recordkeeping requirements for visible emissions. [ss. NR 439.04(1)(d) and NR 439.055(1), (2) and (5), Wis. Adm. Code; 14-DMM-191]

3. Pollutant: Sulfur Dioxide

a. Limitation:
(1) 92.7 pounds per hour averaged over any consecutive 24 hours. [s. NR 417.07(5)(b), Wis. Adm. Code; 86-SJK-072]

(2) The sulfur content of residual fuel oil may not exceed 2.5 percent by weight. [s. NR 417.07(5), Wis. Adm. Code; 86-SJK-072]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall calculate and record the daily average sulfur dioxide emission rate in units of pounds per hour. The average hourly boiler sulfur dioxide emissions shall be calculated for each boiler by dividing total sulfur dioxide emissions for each day by the hours of boiler operation for that day. These records shall be available for inspection by the Department upon request. [s. 285.65(3), Wis. Stats.; 86-SJK-072] (2) See requirements for residual oil in Condition ZZZ.5. [s 285.65(3), Wis. Stats.; 14-DMM-191] (3) The permittee shall keep the records required in Condition A.3.c.(3). [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever compliance emission testing is required for Sulfur Dioxide Emissions, the permittee shall use US EPA Method 6, 6A, 6B or 6C, or an alternate method approved in writing by the Department. [s. NR 439.06(2)(a), Wis. Adm. Code; est. in 445031180-P20] (2) See testing, reporting, and recordkeeping requirements for residual oil in Condition ZZZ.5. [ss. NR 417.07(7)(a)4. and NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P10] (3) The permittee shall keep records of the following for each day that Boiler B07 operates: (a) The SO_2 emission factor for each fuel burned, in units of pounds SO_2 per pound of fuel for solid fuels, pounds of SO_2 per gallon of fuel for liquid fuels, and pounds of SO_2 per cubic foot of fuel for gaseous fuels. See Condition A'.3.c.(4) for emission factor requirements. (b) The quantity of each fuel burned, in units of pounds for solid fuels, gallons for liquid fuels, and cubic feet for gaseous fuels. (c) If the emission factor for a particular fuel depends on the sulfur content of the fuel, the weight percent sulfur content of the fuel. (d) The total sulfur dioxide emissions from all fuels burned, in pounds. Total daily SO_2 emissions shall be determined as follows: (i) Multiply the daily quantity of each fuel burned by the appropriate emission factor. (ii) Sum the daily SO_2 emissions from each individual fuel burned. (e) The average hourly sulfur dioxide emissions, in pounds per hour, determined by dividing total sulfur dioxide emissions by total hours of operation. (f) The total gallons of residual fuel oil burned. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

A'. Stacks S07, S09, Boiler B07, Control Devices C01, C02, C07, C7911, C7911DSI:
204 million BTU per hour Stoker Power Boiler No. 7, installed/last modified in 1963. Controlled by multiclone C01 (1991), wet scrubber C02 (1976, modified in 2003), ESP C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Construction Permit 14-DMM-191. The conditions in this Table A' apply after the dry sorbent injection system C7911DSI is constructed and operational.

	(4) The permittee shall obtain SO_2 emission factors for Condition A'.3.c.(3)(a) from one of the following sources: (a) Conduct SO_2 emissions testing using one of the test methods in Condition A'.3.c.(1) and the following test conditions: (i) During emissions testing, burn only one type of fuel. (ii) During emissions testing, record the fuel usage rate, in pounds per hour for solid fuels, gallons per hour for liquid fuels, and cubic feet for gaseous fuels. (iii) Determine the emission factor by dividing the sulfur dioxide emission rate during testing, in pounds per hour, by the fuel usage rate during testing, in pounds, gallons, or cubic feet per hour, as appropriate. (b) Use AP-42 emission factors.[10] (i) The SO_2 emission factor for bark/wood waste shall be developed using AP-42, Table 1.6-2. (ii) The SO_2 emission factor for natural gas shall be taken from AP-42, Table 1.4-2. (iii) The SO_2 emission factor for residual fuel oil shall be developed using AP-42, Table 1.3-1. (c) Use other studies or reports if approved by the Department. (d) The permittee shall keep on file the emissions test reports, fuel analyses, calculations and/or other records or information used to develop the emission factors. [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

4. Pollutant: NR 445 Hazardous Air Pollutant Emissions: Nickel and Formaldehyde

These conditions do not apply on and after January 31, 2017. [s. NR 445.01(1)(b), Wis. Adm. Code] [11]

a. Limitations:

(1) *Before January 31, 2017, the permittee shall control emissions with Best Available Control Technology (BACT) for nickel. BACT shall consist of Current Operating Practices, defined as the following:
(a) Maintain temperatures above the boiler grate at 1400 to 1950 °F;
(b) Provide a 2.2 second residence time at 1400 to 1950 °F;
(c) Operate C01 and C02 whenever the boiler operates; and
(d) BACT does not apply during periods of boiler startup, shutdown or malfunction.
[s. NR *445.07(1)(c), Wis. Adm. Code; 14-DMM-191]

(2) *Before January 31, 2017, BACT for formaldehyde shall consist of Current Operating Practices defined under condition A'.4.a.(1). [s. NR *445.07(1)(c), Wis. Adm. Code; 14-DMM-191]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) *Before January 31, 2017, the permittee shall demonstrate compliance with condition A'.4.a.(1)(a) to (c) through flue gas temperature and residence time analysis whenever requested by the	(1) *Before, January 31, 2017, the permittee shall maintain current documentation demonstrating flue gas temperature and residence time analysis. [s. NR 439.04(1)(d), Wis. Adm. Code; 14-DMM-191]

[10] AP-42 is the Compilation of Air Pollutant Emission Factors, available at the website https://www3.epa.gov/ttn/chief/ap42/index.html

[11] Per s. NR 445.01(1)(b), Wis. Adm. Code, NR 445 requirements do not apply to pollutants that are regulated by a NESHAP. On and after January 31, 2017, this boiler will comply with the Industrial Boiler NESHAP, 40 CFR Part 63 Subpart DDDDD. While Subpart DDDDD requires compliance by January 31, 2016, the permittee applied for and received a one-year compliance extension as allowed under 40 CFR 63.6(i).

A'. Stacks S07, S09, Boiler B07, Control Devices C01, C02, C07, C7911, C7911DSI:
204 million BTU per hour Stoker Power Boiler No. 7, installed/last modified in 1963. Controlled by multiclone C01 (1991), wet scrubber C02 (1976, modified in 2003), ESP C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015). **Construction Permit 14-DMM-191. The conditions in this Table A' apply after the dry sorbent injection system C7911DSI is constructed and operational.**

Department. [s. 285.65(3), Wis. Stats.; 14-DMM-191] (2) *Before January 31, 2017, the permittee shall demonstrate compliance through control equipment operation, maintenance, and inspection requirements as stated in the particulate matter emission limitation section for this source. [s. 285.65(3), Wis. Stats.; 14-DMM-191]	(2) *Before January 31, 2017, the permittee shall keep records of any maintenance or repairs performed as a result of the inspections and maintenance checks. The permittee shall record the date of the maintenance or repairs. [s. NR 439.04(1)(d), Wis. Adm. Code; 14-DMM-191] (3) *Whenever stack testing is requested, the permittee shall use test methods approved by the Department. [s. NR 439.06(8), Wis. Adm. Code; 14-DMM-191]

5. Pollutant: Alternate Fuel Use Emissions

a. Limitation:
(1) Tire-derived fuel (TDF) may not supply more than 10 percent of the heat input to the boiler or the highest heat input that demonstrates compliance with the emission limit of Condition A'.1.a.(1) and (2), whichever is less. [s. NR 415.06(2)(a), Wis. Adm. Code, and s. 285.65(3), Wis. Stats.; est. in 445031180-P10]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) When requested by the Department, the permittee shall sample and analyze fuels, other than coal and residual fuel oil, in a manner specified by the Department. [s. NR 439.085(4), Wis. Adm. Code, and s. 285.65(3), Wis. Stats.; est. in 445031180-P01] (2) The permittee shall calculate the percentage heat input supplied to the boiler from TDF using the following calculation: $$P = \left[\frac{HC_t * Q_t}{\sum_{i=1}^{n} HC_i * Q_i} \right] * 100$$ where: P is the daily average percentage (of heat input supplied to the boiler) by TDF; HC_t is the heat content of the TDF used during the day, expressed in BTU per pound; Q_t is the amount of TDF used during the day, expressed in pounds; n is the total number of fuels fired in the boiler during the day; i represents each fuel fired during the day; HC_i is the heat content of each individual fuel fired during the day; and Q_i is the amount of each individual fuel fired during the day. [s. 285.65(3), Wis. Stats.; est. in 445031180-P20]	(1) Whenever an alternate fuel listed in Condition A'.5.a.(1) is burned, the permittee shall keep the following records for each fuel co-fired: (a) The daily amount of each fuel consumed, (expressed in pounds for solid fuels, thousand gallons for liquid fuels, and million cubic feet for gaseous fuels), (b) The heat content of each fuel (expressed in BTU per pound for solid fuels, BTU per thousand gallons for liquid fuels, and BTU per million cubic feet for gaseous fuels), (c) The daily average percentage of heat input (P) that was supplied to the boiler from TDF for each day of the month. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20] (2) Whenever TDF is used, the permittee shall obtain a grab sample of TDF on a monthly basis, for analysis of heat content. [s. NR 439.08(3), Wis. Adm. Code; est. in 445031180-P20] (3) The permittee shall keep records of fuel sampling and make them available to the Department upon request. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P10]

A'. Stacks S07, S09, Boiler B07, Control Devices C01, C02, C07, C7911, C7911DSI:
204 million BTU per hour Stoker Power Boiler No. 7, installed/last modified in 1963. Controlled by multiclone C01 (1991), wet scrubber C02 (1976, modified in 2003), ESP C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Construction Permit 14-DMM-191. The conditions in this Table A' apply after the dry sorbent injection system C7911DSI is constructed and operational.

6. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, by 40 CFR Part 63, Subpart DDDDD: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial and Institutional Boilers and Process Heaters
These Requirements Apply on and After January 31, 2017. [40 CFR s. 63.6(i); s. NR 460.05(7), Wis. Adm. Code]

a. Limitation:
(1) The permittee shall comply with ONE of the following:
(a) Hydrogen chloride (HCl) emissions may not exceed 0.022 pound per million BTU (lb per MMBtu) of heat input; OR
(b) HCl emissions may not exceed 0.025 lb per MMBtu of steam output; OR
(c) HCl emissions may not exceed 0.27 pounds per megawatt-hour (lb per MWh).
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR 63.7500(a)(1); 14-DMM-191]

(2) The permittee shall comply with ONE of the following:
(a) Mercury emissions may not exceed 5.7×10^{-6} lb per MMBtu of heat input; OR
(b) Mercury emissions may not exceed 6.4×10^{-6} lb per MMBtu of steam output; OR
(c) Mercury emissions may not exceed 7.3×10^{-5} lb per MWh.
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR 63.7500(a)(1); 14-DMM-191]

(3) The permittee shall comply with ONE of the following:
(a) Carbon monoxide emissions may not exceed 1,500 parts per million by volume on a dry basis corrected to 3 percent oxygen (ppmdv at 3% O_2), based on a three-run average; OR
(b) If a carbon monoxide continuous emission monitoring system (CO CEMS) is used, carbon monoxide emissions may not exceed 720 ppmdv at 3% O_2, based on a 30-day rolling average; OR
(c) Carbon monoxide emissions may not exceed 1.4 lb per MMBtu of steam output, based on a three-run average; OR
(d) Carbon monoxide emissions may not exceed 17 lb per MWh, based on a three-run average.
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR 63.7500(a)(1); 14-DMM-191]

(4) The permittee shall comply with ONE of the following:
(a) Filterable particulate matter (PM) emissions may not exceed 0.037 lb per MMBtu of heat input; OR
(b) Total selected metals (TSM) emissions may not exceed 0.00024 lb per MMBtu of heat input; OR
(c) Filterable PM emissions may not exceed 0.043 lb per MMBtu of steam output; OR
(d) Filterable PM emissions may not exceed 0.52 lb per MWh; OR
(e) TSM emissions may not exceed 2.8×10^{-4} lb per MMBtu of steam output; OR
(f) TSM emissions may not exceed 3.4×10^{-4} lb per MWh.
(g) Total selected metals (TSM) means the sum of the following metallic hazardous air pollutants: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR 63.7500(a)(1) and 63.7575; 14-DMM-191]

(5) The permittee may use emissions averaging, contained in sections AAA.8. and 14., energy efficiency credits contained in section AAA.14 and output based limits per section AAA.1, to meet the PM (or TSM), HCl, and mercury limits. [40 CFR 63.7522 and 63.7541; 14-DMM-191]

(6) When multiple boilers are operating at the same time, the permittee may average emissions as allowed under 40 CFR 63, Subpart DDDDD. See sections AAA.8. and AAA.14 of this permit. [40 CFR 63.7522 and 63.7541; 14-DMM-191]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) See applicable compliance demonstration methods in AAA. [s. 285.65(13), Wis. Stats.; 40 CFR Part 63, Subpart DDDDD; 14-DMM-191]	(1) See applicable test methods, recordkeeping requirements and monitoring requirements in AAA. [s. 285.65(13), Wis. Stats.; 40 CFR Part 63, Subpart DDDDD; 14-DMM-191]

7. Condition Type: Requirements for Wet Scrubber C02, Baghouse C7911 & ESP C07 that Apply Before January 31, 2017

a. Compliance Demonstration	**b. Record keeping, and Monitoring**
(1) The wet scrubber shall be equipped with a device to measure the water flow and pressure drop across the wet	(1) The permittee shall monitor the following parameters for the wet scrubber when the device is in operation:

A'. Stacks S07, S09, Boiler B07, Control Devices C01, C02, C07, C7911, C7911DSI:
204 million BTU per hour Stoker Power Boiler No. 7, installed/last modified in 1963. Controlled by multiclone C01 (1991), wet scrubber C02 (1976, modified in 2003), ESP C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015). **Construction Permit 14-DMM-191. The conditions in this Table A' apply after the dry sorbent injection system C7911DSI is constructed and operational.**

scrubber. [s. NR 439.055(1)(e), Wis. Adm. Code, and s. 285.65(3), Wis. Stats.; 14-DMM-191]	(a) Liquid flow rate to scrubber, in gallons per minute, and (b) Liquid pressure to scrubber, in inches of water column. [s. NR 439.055(1)(e) and 439.055(5), Wis. Adm. Code; 14-DMM-191]
(2) The electrostatic precipitator (ESP) shall be equipped with a device to measure the primary and secondary voltage in volts, the primary and secondary current in amps, and the sparking rate, in sparks per minute. [s. NR 439.055(1)(c), Wis. Adm. Code, and s. 285.65(3), Wis. Stats.; 14-DMM-191]	(2) The permittee shall keep records of each 3-hour block average water flow and pressure drop across the wet scrubber when the device is in operation. [ss. NR 439.04(1)(d) and NR 439.055(2)(b) and (5), Wis. Adm. Code; 14-DMM-191]
(3) The baghouse shall be equipped with a device to measure the pressure drop across the baghouse. [s. NR 439.055(1)(c), Wis. Adm. Code, and s. 285.65(3), Wis. Stats.; 14-DMM-191]	(3) When the ESP is in operation, the permittee shall monitor the following parameters: (a) The primary and secondary voltage in volts; (b) The primary and secondary current, in amps; and (c) The sparking rate, in sparks per minute. [s. NR 439.055(1)(c), Wis. Adm. Code; 14-DMM-191]
(4) When operating wet scrubber C02, the permittee shall operate the scrubber with the following minimum parameter values, based on a 3-hour block average, unless alternate ranges are approved by the department, in writing: (a) A water flow to C02 of 141.2 gallons per minutes; and (b) A pressure drop across the wet scrubber of 2.3 inches water column. [ss. NR 439.055(1)(e), Wis. Adm. Code, and s. 285.65(3), Wis. Stats.; 14-DMM-191]	(4) When the ESP is in operation, the permittee shall record the primary and secondary voltage in volts, the primary and secondary current in amps, and the sparking rate, in sparks per minute, once for every 8 hours of source operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055(2)(b), Wis. Adm. Code; 14-DMM-191]
(5) The permittee shall perform periodic inspections of the wet scrubber to ensure that the control equipment is operating properly. The time interval between inspections may not exceed eighteen (18) months. The periodic inspections shall include, but not be limited to inspections and repair or maintenance as necessary, of: (a) The baffle for bowing and sloping; (b) The shower nozzle for plugging; and (c) All seals and ducts for leakage. [s. 285.65(3), Wis. Stats.; est. in 445031180-P01]	(5) The permittee shall keep daily records of the operation of each transformer-rectifier (TR) set in the ESP for each day that the ESP operates. The records shall indicate the time and duration when any TR set is not operating while the ESP is in operation. [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a), Wis. Adm. Code; 14-DMM-191]
(6) The permittee shall perform periodic inspections of the ESP by qualified personnel to ensure that the control equipment is operating properly. The time interval between inspections may not exceed twenty-six (26) months. Compliance tests may not be conducted within six (6) months of a periodic inspection. The periodic inspections shall include but not limited to the inspection, repair, maintenance and cleaning as necessary, of: (a) Electrode wires and bushings; (b) Inlet and outlet ducts for holes or other leakage; (c) Interior of the ESP; (d) Hammer shafts, motors and drive mechanisms; (e) Duct work between the boilers and the ESP. [s. 285.65(3), Wis. Stats.; 14-DMM-191]	(6) When the baghouse is in operation, the permittee shall monitor the pressure drop across the baghouse and record the pressure drop once for every 8 hours of source operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055(1)(a) and (2)(b)1., Wis. Adm. Code; 14-DMM-191]
	(7) The permittee shall keep records of: (a) The date of each internal inspection of the control equipment; (b) A list of the items inspected; and (c) Any maintenance or repairs performed as a result of these inspections. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P10]

B. Stack S09, B09, C06 and C07
192.4 million BTU per hour Single Cyclone Power Boiler No 9. Fired on coal and alternate fuels. Last modified in 1957. B09 is controlled by multiclone C06 (1974) and ESP C07 (C-E Walther Inc., 1976) in series.
Stack S09, B11, C11 and C07 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensible gases (NCG). Last modified in 1999. B11 is controlled by multiclone C11 (1966) and C07 in series.
Current Operation Permit. The conditions in this Table B apply before the dry sorbent injection system C7911DSI is constructed and operational.

1. Pollutant: Particulate Matter/PM_{10} Emissions

a. Limitation:

(1) Particulate matter emissions from boiler B09 may not exceed:
(a) 0.30 pound per million BTU heat input; and
(b) 57.7 pounds per hour.
[s. NR 415.06(2)(a), Wis. Adm. Code; s. 285.65(7), Wis. Stats.; 86-SJK-072]

(2) Particulate matter emissions from boiler B11 may not exceed:
(a) 0.10 pounds per million BTU heat input; and
(b) 37.9 pounds per hour.
[s. NR 415.06(2)(c), Wis. Adm. Code; s. 285.65(3), Wis. Stats.; 99-SDD-109-R1]

(3) PM_{10} emissions from boiler B09 may not exceed 57.7 pounds per hour. [ss. NR 404.04(8) and (9), and NR 404.05(3)(a), Wis. Adm. Code; s. 285.65(3), Wis. Stats.; est. in 445031180-P20]

(4) PM_{10} emissions from boiler B11 may not exceed 37.9 pounds per hour. [ss. NR 404.04(8) and (9), and NR 404.05(3)(a), Wis. Adm. Code; s. 285.65(3), Wis. Stats.; est. in 445031180-P20]

(5) The permittee shall only fire:
(a) Subbituminous and bituminous coals as the primary fuels in B09 and B11;
(b) Petroleum coke, natural gas, No.6 fuel oil, paper broke, and tire derived fuel (TDF) as alternate fuels in B09 and B11; and,
(c) Other alternate fuels allowed under Condition ZZZ.1.
[s. 285.65(3) Wis. Stats; 99-SDD-109-R1]

(6) The by-pass stack shall only be used during times of warm up or cool down or when both of the boilers are firing at least 85 percent natural gas, by heat input, and no more than 15 percent heat input of other permitted fuels. [s. 285.65(3) Wis. Stats.; 99-SDD-109-R1]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall operate multiclone C06 and electrostatic precipitator (ESP) C07 at all times B09 operates; and multiclone C11 and ESP C07 at all times B11 is in operation, except as allowed under Conditions B.1.b.(8) and (9). [s. 285.65(3) Wis. Stats.; 86-SJK-072-R1] (2)(a) Before January 31, 2017, the permittee shall perform compliance emission testing for particulate matter every 24 months, as specified in Condition ZZZ.2.a.(1). (b) On and after January 31, 2017, the permittee shall perform compliance emission testing for particulate matter at the times specified in Conditions AAA.5.(a), (b) and (c). [ss. NR 439.075(2)(a)1. and (3)(b), Wis. Adm. Code; 99-SDD-109-R1-P20]	(1) Whenever particulate matter emissions testing is required, the permittee shall use EPA Method 5 to test for noncondensible particulate matter, and EPA Method 202 to test for condensible particulate matter emissions. [ss. NR 407.09(1)(c)1.a. and 439.06(1), Wis. Adm. Code; est. in 445031180-P10] (2) Whenever PM_{10} emission testing is required, the permittee shall use one of the following: (a) Emissions testing results generated per Condition B.1.c.(1) above. If this option is chosen, all emissions measured by US EPA Methods 5 and 202 are assumed to be PM_{10}. (b) US EPA Method 201A, and US EPA Method 202 for condensible particulate matter. (c) Alternate methods as approved in advance by the Department. [ss. NR 439.06(1) and (1m), Wis. Adm. Code; est. in

B. Stack S09, B09, C06 and C07
192.4 million BTU per hour Single Cyclone Power Boiler No 9. Fired on coal and alternate fuels. Last modified in 1957. B09 is controlled by multiclone C06 (1974) and ESP C07 (C-E Walther Inc., 1976) in series.
Stack S09, B11, C11 and C07 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensible gases (NCG). Last modified in 1999. B11 is controlled by multiclone C11 (1966) and C07 in series.
Current Operation Permit. The conditions in this Table B apply before the dry sorbent injection system C7911DSI is constructed and operational.

(3) The permittee shall monitor the following parameters for the electrostatic precipitator:
(a) The primary voltage in volts;
(b) The primary current in amps;
(c) The secondary current in amps; and
(d) The sparking rate, in sparks per minute.
[s. NR 439.055(1)(c), Wis. Adm. Code; 99-SDD-109-R1]

(4) The permittee shall monitor the pressure drop across the multi-cyclone in terms of inches of water. [s. NR 439.055(1)(e), Wis. Adm. Code; 99-SDD-109-R1]

(5) The permittee shall perform periodic inspections of the ESP by qualified personnel to ensure that the control equipment is operating properly. The time interval between inspections may not exceed twenty-six (26) months. Compliance tests may not be conducted within six (6) months of a periodic inspection. The periodic inspections shall include but not limited to the inspection, repair, maintenance and cleaning as necessary, of:
(a) Electrode wires and bushings;
(b) Inlet and outlet ducts for holes or other leakage;
(c) Interior of the ESP;
(d) Hammer shafts, motors and drive mechanisms;
(e) Duct work between the boilers and the ESP.
[s. NR 407.09(4)(a)3.b., Wis. Adm. Code; 99-SDD-109-R1]

(6) The permittee shall perform periodic inspections of the multi-cyclones to ensure that each control device is operating properly. The time interval between inspections may not exceed eighteen (18) months for C06 and twenty six (26) months for C11. The periodic inspections shall include but not be limited to inspections and repair or maintenance as necessary, of:
The cyclone tubes and side walls of hopper area for erosion;
The gaskets on the clean side tube sheet and high temperature gaskets;
The axial inlet spinner vanes for erosion; and
The solid discharge valve for erosion.
[s. NR 407.09(4)(a), Wis. Adm. Code; 99-SDD-109-R1]

(7) The permittee shall perform an inspection of the multi-cyclones' hoppers for pluggage and unplug if necessary at least once per shift while the boilers are operating. [s. NR 439.055(5), Wis. Adm. Code; 99-SDD-109-R1]

(8) While operating B09, the by-pass stack shall be used no more than 8 hours at a time, following the occurrence of a boiler warm-up after a cold shut-down, and no more than 20 times in any calendar year. B09 by-pass stack may also be

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(3) The permittee shall keep monthly records of:
(a) The type of each fuel fired in each boiler [99-SDD-109-R1]; and
(b) The amount of each fuel fired in each boiler [99-SDD-109-R1].
(c) Amounts of fuels fired in each month shall be expressed in tons for solid fuels, in gallons for liquid fuels, and in cubic feet for gaseous fuels. [est. in 445031180-P20]
[s. NR 439.04(1)(d), Wis. Adm. Code]

(4) The permittee shall notify the Department when B09 or B11 fires a new alternate fuel at least six weeks prior to initially firing the fuel. As part of the notification, the permittee shall provide an analysis that shows the firing of the fuel meets the requirements of Condition ZZZ.1. [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1]

(5) The permittee shall record the multi-cyclone and ESP parameters once every eight hours whenever the boiler is operated. [s. NR 439.055(2)(b), Wis. Adm. Code; 99-SDD-109-R1]

(6) The permittee shall keep records of:
(a) The date and initials of the person(s) performing the internal inspections of the control equipment;
(b) A list of the items inspected; and
(c) Any maintenance or repairs performed as a result of these inspections.
[s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1]

(7) The permittee shall keep the following:
(a) a log indicating that the multi-cyclones' hoppers were inspected at least once per shift while the boilers were operating;
(b) records of any maintenance or repairs performed as a result of the hopper inspections; and
(c) the date and initials of the person performing the maintenance or repairs. [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1]

(8) When the bypass stack is used, the permittee shall keep records of:
(a) the type of fuel used;
(b) the amount of fuel used;
(c) the hours of operation;
(d) the number of continuous days used;
(e) the number of days each calendar year used; and

B. Stack S09, B09, C06 and C07
192.4 million BTU per hour Single Cyclone Power Boiler No 9. Fired on coal and alternate fuels. Last modified in 1957. B09 is controlled by multiclone C06 (1974) and ESP C07 (C-E Walther Inc., 1976) in series.
Stack S09, B11, C11 and C07 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensible gases (NCG). Last modified in 1999. B11 is controlled by multiclone C11 (1966) and C07 in series.
Current Operation Permit. The conditions in this Table B apply before the dry sorbent injection system C7911DSI is constructed and operational.

used for up to 7 continuous days per year during the annual ESP maintenance outage. B09 by-pass stack may be used without restriction when firing 100% natural gas. [s. NR 407.09(1)(a), Wis. Adm. Code and s. 285.65(7), Wis. Stats.; 99-SDD-109-R1] (9) While operating B11, the by-pass stack shall be used no more than 8 hours at a time, following the occurrence of a boiler warm-up after a cold shut-down, and no more than 15 times in any calendar year. B11 by-pass stack may also be used for up to 7 continuous days per year during the annual ESP maintenance outage. B11 by-pass stack may be used without restriction when firing 100% natural gas. [s. NR 407.09(1)(a), Wis. Adm. Code and s. 285.65(7), Wis. Stats.; 99-SDD-109-R1] (10) Compliance Assurance Monitoring (CAM): The permittee shall meet the following requirements: (a) Whenever one or more of the boilers is operating, the permittee shall monitor opacity, using a continuous opacity monitoring system (COMS) that meets the requirements of Condition B.2.b.(1). (b) The indicator range for opacity is 20% or less, based on a three-hour block average. (c) For the purpose of defining an excursion, the permittee shall calculate three-hour block averages of thirty non-overlapping six-minute average opacities. An excursion is any three-hour block average opacity greater than 20%. Three-hour block averages need only be calculated if one or more six-minute opacity averages during a three-hour period is over 20%. (d) The quality improvement plan (QIP) threshold is five excursions in a six-month period. (e) The permittee shall operate the COMS in accordance with 40 CFR ss. 64.7 and 64.8 as detailed in Conditions ZZZ.10.a.(1) and (2). [s. 285.65(13), Wis. Stats., and 40 CFR ss. 64.3(a), 64.6(c)(2) and (3), 64.7(c) and 64.8(a); est. in 445031180-P20]	(f) which by-pass stack was used. [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1] (9) At least once every twenty-seven months, within 30 days of the inspection of the ESP and duct work, the permittee shall submit a report to the Department that contains the findings, conclusions, recommendations and qualifications of the inspector(s). [s. NR 407.09(4)(a), Wis. Adm. Code; 445031180-P10] (10) The permittee shall keep daily records of the operation of each transformer-rectifier (TR) set in the ESP. The records shall indicate the time and duration when any TR set is not operating while the ESP is in operation. [s. NR 407.09(4)(a), Wis. Adm. Code; 445031180-P10] (11) Compliance Assurance Monitoring: (a) The excess emission reports required by Condition B.2.c.(2) shall satisfy the CAM reporting requirements of 40 CFR s. 64.9(a)(2)(i) and (ii). (b) The semiannual monitoring report required by Condition ZZZ.3.a.(2) shall include, if applicable, a description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR s. 64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring. (c) The permittee shall keep the records outlined in Condition ZZZ.10.a.(3). [ss. NR 439.03(1)(b) and NR 439.04(1)(d), Wis. Adm. Code; 40 CFR ss. 64.6(c)(3) and 64.9; est. in 445031180-P20]

2. Pollutant: Visible Emissions

a. Limitation:
(1) 20% Opacity. [ss. NR 431.04(2) and NR 431.05, Wis. Adm. Code; est. in 445031180-P10]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall install, calibrate, maintain and operate a continuous opacity monitor (COM)	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA

B. Stack S09, B09, C06 and C07 192.4 million BTU per hour Single Cyclone Power Boiler No 9. Fired on coal and alternate fuels. Last modified in 1957. B09 is controlled by multiclone C06 (1974) and ESP C07 (C-E Walther Inc., 1976) in series. **Stack S09, B11, C11 and C07** 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensible gases (NCG). Last modified in 1999. B11 is controlled by multiclone C11 (1966) and C07 in series. **Current Operation Permit. The conditions in this Table B apply before the dry sorbent injection system C7911DSI is constructed and operational.**	
system for the measurement of opacity in accordance with the performance specifications in 40 CFR part 60, Appendix B, and the requirements in ss. NR 439.09 and 439.095. The permittee shall submit a quality control and quality assurance plan for approval by the Department. The monitor shall follow the QA/QC plan, as approved by the department. [ss. NR 407.09(4)(a)1., 439.095(5)(a)1. and NR 439.095(6), Wis. Adm. Code; 99-SDD-109-R1]	Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 99-SDD-109-R1] (2) The permittee shall report quarterly excess emissions in accordance with condition ZZZ.3.b.(1). [ss. NR 439.03(1)(b) and 439.09(10), Wis. Adm. Code; est. in 445031180-P10]

B. Stack S09, B09, C06 and C07
192.4 million BTU per hour Single Cyclone Power Boiler No 9. Fired on coal and alternate fuels. Last modified in 1957. B09 is controlled by multiclone C06 (1974) and ESP C07 (C-E Walther Inc., 1976) in series.
Stack S09, B11, C11 and C07 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensible gases (NCG). Last modified in 1999. B11 is controlled by multiclone C11 (1966) and C07 in series.
Current Operation Permit. The conditions in this Table B apply before the dry sorbent injection system C7911DSI is constructed and operational.

3. Pollutant: Sulfur Dioxide

a. Limitation:
(1) 7 pounds per million BTU averaged over 24 hours and 5.5 pounds per million BTU averaged over 30 days for each boiler. [s. NR 417.07(2)(b), Wis. Adm. Code; 99-SDD-109-R1]

(2) Combined emissions from B09 and B11 shall not exceed 3865.4 pounds per hour averaged over any 24 hour period. [s. NR 417.07(5)(b), Wis. Adm. Code; 99-SDD-109-R1]

(3) The sulfur content of the no. 6 fuel oil may not exceed 2.5 percent by weight. [s. NR 417.07(5), Wis. Adm. Code; 99-SDD-109-R1]

(4) The sulfur content of the coal blend may not exceed 4.4 percent by weight. A coal blend is any proportion of coal and petroleum coke. [s. NR 417.07(5), Wis. Adm. Code; 99-SDD-109-R1-OP]

(5) Combined emissions from B09 and B11 shall not exceed 1.7 pounds per million BTU, notwithstanding Condition B.3.a.(1), if the stack height is between 175 and 290 feet. [s. NR 417.07(5)(b), Wis. Adm. Code; 86-SJK-072]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall calibrate and maintain a sulfur dioxide continuous emission monitor (CEM). [s. NR 417.07(7)(a)1., Wis. Adm. Code; 99-SDD-109-R1] (2) The permittee shall comply with all provisions and requirements as described in Performance Specification 2, 40 CFR Part 60, Appendix B for the CEM system. [s. NR 439.09(2), Wis. Adm. Code; 99-SDD-109-R1] (3) The permittee is exempt from fuel sampling for sulfur content as long as operation of the sulfur dioxide CEM continues to meet the performance specification requirements of s. NR 439.09, Wis. Adm. Code. [s. NR 439.085(1)(c), Wis. Adm. Code; 99-SDD-109-R1] (4) The permittee shall keep the records required in Conditions B.3.c. (2) and (3). [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever compliance emission testing is required for Sulfur Dioxide Emissions, the permittee shall use US EPA Method 6, 6A, 6B or 6C. [s. NR 439.06(2)(a), Wis. Adm. Code; 99-SDD-109-R1] (2) The permittee shall calculate and record the daily average sulfur dioxide emission rate in units of pounds per hour and pounds per million BTU. The average hourly boiler sulfur dioxide emissions shall be calculated for each boiler as shown in the QA/QC plan approved by the department. [ss. NR 439.04(1)(d) and NR 439.04(2), Wis. Adm. Code; 99-SDD-109-R1] (3) For each boiler, the permittee shall calculate and record the 30-day average sulfur dioxide emission rate, in pounds per million BTU, for each consecutive 30-day period. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20] (4) The permittee shall report quarterly excess emissions in accordance with condition ZZZ.3.b.(1). [ss. NR 439.03(1)(b) and NR 439.09(10), Wis. Adm. Code; est. in 445031180-P10]

B. Stack S09, B09, C06 and C07
192.4 million BTU per hour Single Cyclone Power Boiler No 9. Fired on coal and alternate fuels. Last modified in 1957. B09 is controlled by multiclone C06 (1974) and ESP C07 (C-E Walther Inc., 1976) in series.
Stack S09, B11, C11 and C07 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensible gases (NCG). Last modified in 1999. B11 is controlled by multiclone C11 (1966) and C07 in series.
Current Operation Permit. The conditions in this Table B apply before the dry sorbent injection system C7911DSI is constructed and operational.

4. Pollutant: * NR 445 Hazardous Air Pollutant Emissions: Nickel and Formaldehyde

a. Limitations:
(1) * Before January 31, 2017, the permittee shall control emissions with Best Available Control Technology (BACT) for nickel. BACT shall consist of Current Operating Practices, defined as the following:
(a) Maintain the temperature above 1700 °F, 25 feet above the grate at the centerline of each boiler,
(b) Provide a 0.5 second residence time at a temperature above 1700 °F,
(c) Operate C06, C11 and C07 whenever the boilers operate.
BACT does not apply during periods of boiler startup, shutdown or malfunction.
[s. NR 445.07(1)(c), Wis. Adm. Code; 99-SDD-109-R1]

(2) * Before January 31, 2017, the permittee shall control emissions of formaldehyde with BACT. BACT shall consist of Current Operating Practices defined under condition B.4.a.(1)(a) to (c). [s. NR *445.07(1)(c), Wis. Adm. Code; est. in 445031180-P10]

(3) *Conditions B.4.a.(1) and (2) do not apply on and after January 31, 2017. [s. NR *445.01(1)(b), Wis. Adm. Code; est. in 445031180-P20] [12]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) * Before January 31, 2017, the permittee shall demonstrate compliance with condition B.4.a.(1)(a) to (c) through flue gas temperature and residence time analysis whenever requested by the Department. [s. NR 407.09(4)(a), Wis. Adm. Code; 99-SDD-109-R1] (2) * Before January 31, 2017, the permittee shall demonstrate compliance through control equipment operation, maintenance, and inspection requirements as stated in the particulate matter emission limitation section for this source. [s. NR 407.09(4)(a), Wis. Adm. Code; 99-SDD-109-R1]	(1) * Before January 31, 2017, the permittee shall maintain documentation demonstrating flue gas temperature and residence time analysis. [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1] (2) * Before January 31, 2017, the permittee shall keep records of any maintenance or repairs performed as a result of the inspections and maintenance checks. Records shall note the date and initials of the person performing the maintenance or repairs. [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1]

5. Pollutant: Total Reduced Sulfur

a. Limitation:
(1) Emissions from use of NCG shall not exceed 6645 pounds of SO_2 per month on a 12 month rolling average. [s. NR 417.07(5), Wis. Adm. Code; 99-SDD-109-R1]

(2) The furnace temperature shall be at least 1200 ^{o}F and retention time at least 0.5 seconds. This condition applies to Boiler B11 when burning NCG. [ss. NR 405.02, and 417.06(2), Wis. Adm. Code; 99-SDD-109-R1]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) NCGs shall be routed to either the lime kiln (P12) or No. 11 power boiler (B11) at all times the NCG system is in operation in order to reduce the emissions of TRS. [s. NR 417.06(2), Wis. Adm. Code; 99-SDD-109-R1]	(1) Whenever compliance emission testing is required for Total Reduced Sulfur Emissions, the permittee shall use US EPA Method 15A, 16, 16A, or 16B, or an alternate method approved in writing by the Department. [s. NR 439.06(7)(a), Wis. Adm.

[12] Per s. NR 445.01(1)(b), Wis. Adm. Code, NR 445 requirements do not apply to pollutants that are regulated by a NESHAP. On and after January 31, 2017, these boilers will comply with the Industrial Boiler NESHAP, 40 CFR Part 63 Subpart DDDDD. While Subpart DDDDD requires compliance by January 31, 2016, the permittee applied for and received a one-year compliance extension as allowed under 40 CFR s. 63.6(i).

B. Stack S09, B09, C06 and C07
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Stack S09, B11, C11 and C07 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensible gases (NCG). Last modified in 1999. B11 is controlled by multiclone C11 (1966) and C07 in series.
Current Operation Permit. The conditions in this Table B apply before the dry sorbent injection system C7911DSI is constructed and operational.

(2) The permittee shall demonstrate compliance with Condition B.5.a.(2) through furnace temperature and residence time analysis for Boiler B11 whenever requested by the Department. [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	Code; 99-SDD-109-R1-P20] (2) The permittee shall record pulp production rate in terms of air-dry tons of pulp (ADTP) per hour whenever NCGs are burned. [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1] (3) The permittee shall use the average pulp rate (air-dry tons/hr) while NCG is burned along with the emission factor of 5.56 lb/ton of air-dry pulp to determine SO_2 emission from combustion of NCG after connecting condensate tanks T83 and T84 to the LVHC system. [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1] (4) The permittee shall record the NCG combustion start and end times. [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1] (5) The permittee shall maintain documentation demonstrating furnace temperature and residence time analysis. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

6. Pollutant: Alternate Fuel Use Emissions

a. Limitation:
(1) Tire-derived fuel (TDF) may not supply more than 8.5% of the heat input to the boiler. [s. NR 415.06(1)(b), Wis. Adm. Code; 99-SDD-109-R1]

(2) Petroleum coke may not be burned in a boiler in greater than the percentage of heat input supplied by petroleum coke that demonstrated compliance with applicable emission limitations. [s. NR 415.06(1)(b), Wis. Adm. Code; 99-SDD-109-R1]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) When requested by the Department, the permittee shall sample and analyze fuels, other than coal and residual fuel oil, in a manner specified by the Department. [s. NR 439.085(4), Wis. Adm. Code; 99-SDD-109-R1] (2) The permittee shall calculate the percentage heat input supplied to each boiler from TDF (or other alternate fuel) using the following calculation: $P = \left[\frac{HC_t * Q_t}{\sum_{i=1}^{n} HC_i * Q_i} \right] * 100$ where:	(1) Whenever an alternate fuel listed in condition B.6. other than petroleum coke is burned, the permittee shall keep the following records for each fuel co-fired: (a) The daily amount of each fuel consumed, amount (expressed in pounds for solid fuels, thousand gallons for liquid fuels, and million cubic feet for gaseous fuels), (b) The heat content of each fuel (expressed in BTU per pound for solid fuels, BTU per thousand gallons for liquid fuels, and BTU per million cubic feet for gaseous fuels), (c) The daily average percentage of heat input (P) that was supplied to the boiler from TDF for each day of the month (P, expressed in percentage heat input to the boiler). [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1] (2) Notwithstanding condition B.6.c.(1), in any month

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Stack S09, B11, C11 and C07 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensible gases (NCG). Last modified in 1999. B11 is controlled by multiclone C11 (1966) and C07 in series.
Current Operation Permit. The conditions in this Table B apply before the dry sorbent injection system C7911DSI is constructed and operational.

P is the daily average percentage (of heat input supplied to the boiler) of TDF; **HC_t** is the heat content of the TDF used during the day (expressed in BTU per pound); **Q_t** is the amount of TDF used (expressed in pounds) during the day; **n** is the number of fuels fired in the boiler during the day; **I** represents each fuel fired during the day; **HC_i** is the heat content of each individual fuel fired; and **Q_i** is the amount of each individual fuel fired during the day. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code; est. in 445031180-P10] (3) Notwithstanding condition B.6.b.(2), in any month that combustion of a fuel mix containing TDF does not exceed the average stack opacity measured in the last successful stack test conducted per condition B.1.c.(1) which burned TDF, monthly values may be used to define all variables described in condition B.6.b.(2). [s. NR 407.09(1)(c)1.a., Wis. Adm. Code; est. in 445031180-P10]	that condition B.6.b.(3) is used, records shall be kept of the monthly amounts of alternate fuel consumed and a monthly average percentage of each alternate fuel's heat input. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code; est. in 445031180-P10] (3)(a) Whenever TDF is used, the permittee shall obtain a grab sample of TDF on a monthly basis, for analysis of heat content. (b) The permittee shall keep on file the contract with its fuel supplier which specifies the maximum allowable weight percent of petroleum coke in the fuel blend burned in Boilers B09 and B11. [s. NR 439.08(3), Wis. Adm. Code; est. in 445031180-P20] (4) The permittee shall keep records of fuel sampling and make them available to the Department upon request. [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1]

B. Stack S09, B09, C06 and C07
192.4 million BTU per hour Single Cyclone Power Boiler No 9. Fired on coal and alternate fuels. Last modified in 1957. B09 is controlled by multiclone C06 (1974) and ESP C07 (C-E Walther Inc., 1976) in series.
Stack S09, B11, C11 and C07 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensible gases (NCG). Last modified in 1999. B11 is controlled by multiclone C11 (1966) and C07 in series.
Current Operation Permit. The conditions in this Table B apply before the dry sorbent injection system C7911DSI is constructed and operational.

7. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, by 40 CFR Part 63, Subpart DDDDD: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial and Institutional Boilers and Process Heaters
These Requirements Apply on and After January 31, 2017. [40 CFR s. 63.6(i); s. NR 460.05(7), Wis. Adm. Code]

a. Limitations:
(1) On and after January 31, 2017, the permittee shall comply with ONE of the following:
(a) HCl emissions may not exceed 0.022 lb per MMBtu of heat input; OR
(b) HCl emissions may not exceed 0.025 lb per MMBtu of steam output; OR
(c) HCl emissions may not exceed 0.27 lb per MWh.
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR ss. 63.6(i) and 63.7500(a)(1); est. in 445031180-P20]

(2) On and after January 31, 2017, the permittee shall comply with ONE of the following:
(a) Mercury emissions may not exceed 5.7×10^{-6} lb per MMBtu of heat input; OR
(b) Mercury emissions may not exceed 6.4×10^{-6} lb per MMBtu of steam output; OR
(c) Mercury emissions may not exceed 7.3×10^{-5} lb per MWh.
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR ss. 63.6(i) and 63.7500(a)(1); est. in 445031180-P20]

(3) On and after January 31, 2017, the permittee shall comply with ONE of the following:
(a) Filterable PM emissions may not exceed 0.040 lb per MMBtu of heat input; OR
(b) TSM emissions may not exceed 5.3×10^{-5} lb per MMBtu of heat input; OR
(c) Filterable PM emissions may not exceed 0.042 lb per MMBtu of steam output; OR
(d) Filterable PM emissions may not exceed 0.49 lb per MWh; OR
(e) TSM emissions may not exceed 5.6×10^{-5} lb per MMBtu of steam output; OR
(f) TSM emissions may not exceed 6.5×10^{-4} lb per MWh.
(g) Total selected metals (TSM) means the sum of the following metallic hazardous air pollutants: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR ss. 63.6(i), 63.7500(a)(1) and 63.7575; est. in 445031180-P20]

(4) On and after January 31, 2017, the permittee shall comply with ONE of the following:
(a) Carbon monoxide emissions may not exceed 160 ppmdv at 3% O_2, based on a three-run average; OR
(b) If a CO CEMS is used, carbon monoxide emissions may not exceed 340 ppmdv at 3% O_2, based on a 30-day rolling average; OR
(c) Carbon monoxide emissions may not exceed 0.14 lb per MMBtu of steam output, based on a three-run average; OR
(d) Carbon monoxide emissions may not exceed 1.7 lb per MWh, based on a three-run average.
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR ss. 63.6(i) and 63.7500(a)(1); est. in 445031180-P20]

(5) The permittee may use emissions averaging, contained in sections AAA.8. and 14., energy efficiency credits contained in section AAA.14 and output based limits per section AAA.1, to meet the PM (or TSM), HCl, and mercury limits. [40 CFR 63.7522 and 63.7541; est. in 445031180-P20]

B. Stack S09, B09, C06 and C07
192.4 million BTU per hour Single Cyclone Power Boiler No 9. Fired on coal and alternate fuels. Last modified in 1957. B09 is controlled by multiclone C06 (1974) and ESP C07 (C-E Walther Inc., 1976) in series.
Stack S09, B11, C11 and C07 379.0 million BTU per hour Twin Cyclone Power Boiler No. 11. Fired on coal and alternate fuels. B11 can burn non-condensible gases (NCG). Last modified in 1999. B11 is controlled by multiclone C11 (1966) and C07 in series.
Current Operation Permit. The conditions in this Table B apply before the dry sorbent injection system C7911DSI is constructed and operational.

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) See applicable compliance demonstration methods in Table AAA. [s. 285.65(13), Wis. Stats.; 40 CFR Part 63, Subpart DDDDD; est. in 445031180-P20]	(1) See applicable test methods, recordkeeping requirements and monitoring requirements in Table AAA. [s. 285.65(13), Wis. Stats.; 40 CFR Part 63, Subpart DDDDD; est. in 445031180-P20]

B'. Stacks S09, S09Bypass, Boiler B09, Control Devices C06, C07, C7911, C7911DSI:
192.4 million BTU per hour Single Cyclone Power Boiler No 9, installed/last modified in 2016. Controlled by multiclone C06 (1974), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Stack S09, S11Bypass, Boiler B11, Control Devices C11, C07, C7911, C7911DSI:
379.0 million BTU per hour Twin Cyclone Power Boiler No. 11, last modified in 2016. Controlled by multiclone C11 (1966), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Construction Permit 14-DMM-191. The conditions in this Table B' apply after the dry sorbent injection system C7911DSI is constructed and operational.

1. Pollutant: Particulate Matter/PM_{10}/$PM_{2.5}$ Emissions

a. Limitation:
(1) Particulate matter emissions from boiler B09 may not exceed:
(a) 0.15 pounds per million BTU heat input; and
(b) 28.9 pounds per hour.
[s. NR 415.06(2)(a), Wis. Adm. Code, and s. 285.65(7), Wis. Stats.; 14-DMM-191]

(2) Particulate matter emissions from boiler B11 may not exceed:
(a) 0.10 pounds per million BTU heat input; and
(b) 37.9 pounds per hour.
[s. NR 415.06(2)(c), Wis. Adm. Code, and s. 285.65(7), Wis. Stats.; 99-SDD-109-R1]

(3) PM_{10} and $PM_{2.5}$ emissions from boiler B09 may not exceed 28.9 pounds per hour. [ss. NR 404.04(8) and (9), and NR 404.05(3)(a), Wis. Adm. Code, and s. 285.65(3), Wis. Stats.; 14-DMM-191]

(4) PM_{10} and $PM_{2.5}$ emissions from boiler B11 may not exceed 37.9 pounds per hour. [ss. NR 404.04(8) and (9), and NR 404.05(3)(a), Wis. Adm. Code, and s. 285.65(3), Wis. Stats.; 14-DMM-191]

(5) The permittee shall only fire:
(a) Subbituminous and bituminous coals as the primary fuels in B09 and B11;
(b) Petroleum coke, natural gas, No.6 fuel oil, paper broke, and tire derived fuel (TDF) as alternate fuels in B09 and B11; and,
(c) Other alternate fuels allowed under Condition ZZZ.1.
[s. 285.65(3) Wis. Stats; 99-SDD-109-R1]

(6) The permittee may not inject sorbent into the boiler flue gas unless emissions from the boiler are controlled by baghouse C7911.
[s. 285.65(3), Wis. Stats.; 14-DMM-191]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) Before January 31, 2017: (a) At all times that boiler B09 is in operation, except when the boiler is fired on only natural gas, the permittee shall control emissions from the boiler using multiclone C06 and one of the	(1) Whenever particulate matter emissions testing is required, the permittee shall use EPA Method 5 to test for filterable particulate matter and EPA Method 202 to test for condensible particulate matter emissions, or an alternate method approved in writing by the

B'. Stacks S09, S09Bypass, Boiler B09, Control Devices C06, C07, C7911, C7911DSI:
192.4 million BTU per hour Single Cyclone Power Boiler No 9, installed/last modified in 2016. Controlled by multiclone C06 (1974), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Stack S09, S11Bypass, Boiler B11, Control Devices C11, C07, C7911, C7911DSI:
379.0 million BTU per hour Twin Cyclone Power Boiler No. 11, last modified in 2016. Controlled by multiclone C11 (1966), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Construction Permit 14-DMM-191. The conditions in this Table B' apply after the dry sorbent injection system C7911DSI is constructed and operational.

following:
i. ESP C07;
ii. Baghouse C7911 and ESP C07; or
iii. Baghouse C7911.
(b) At all times that boiler B11 is in operation, except when the boiler is fired on only natural gas, the permittee shall control emissions from the boiler using multiclone C11 and one of the following:
i. ESP C07;
ii. Baghouse C7911 and ESP C07; or
iii. Baghouse C7911.
(c) When boiler B09 is fired on only natural gas, bypass stack S09Bypass may be used; and
(d) When boiler B11 is fired on only natural gas, bypass stack S11Bypass may be used.
[s. 285.65(3), Wis. Stats.; 14-DMM-191]

(2) On and after January 31, 2017:
(a) At all times that boiler B09 is in operation, except when the boiler is fired on only natural gas, the permittee shall operate multiclone C06 and baghouse C7911 to control emissions from the boiler;
(b) At all times that boiler B11 is in operation, except when the boiler is fired on only natural gas, the permittee shall operate multiclone C11 and baghouse C7911 to control emissions from the boiler;
(c) When boiler B09 is fired on only natural gas, bypass stack S09Bypass may be used; and
(d) When boiler B11 is fired on only natural gas, bypass stack S11Bypass may be used.
[s. 285.65(3), Wis. Stats.; 14-DMM-191]

(3) The permittee shall monitor the pressure drop across the multiclones when the devices are operating. [s. NR 439.055(1)(e), Wis. Adm. Code; 99-SDD-109-R1]

(4)(a) Before January 31, 2017, the permittee shall perform compliance emission testing for particulate matter every 24 months, as specified in Condition ZZZ.2.a.(1).
(b) On and after January 31, 2017, the permittee shall perform compliance emission testing for particulate matter at the times specified in Conditions AAA.5.(a), (b) and (c).
[ss. NR 439.075(2)(a)1. and (3)(b), Wis. Adm. Code; 99-SDD-109-R1-P20]

(5) The permittee shall perform periodic inspections of the multiclones to ensure that each control device is operating properly. The time interval between inspections may not exceed eighteen (18) months for C06 and twenty-six (26) months for C11. The periodic inspections shall include but not be limited to inspections and repair or maintenance as Department. [ss. NR 407.09(1)(c)1.a. and NR 439.06(1), Wis. Adm. Code; 14-DMM-191]

(2) Whenever compliance emission testing is required, the permittee shall use EPA Test Method 201A for filterable and EPA Method 202 for condensible particulate, or an alternate method approved in writing by the Department. [s. NR 439.06(8), Wis. Adm. Code; 14-DMM-191]

(3) The permittee shall keep monthly records of:
(a) The type of each fuel fired in each boiler; [99-SDD-109-R1] and
(b) The amount of each fuel fired in each boiler. [99-SDD-109-R1]
(c) Amounts of fuels fired in each month shall be expressed in tons for solid fuels, in gallons for liquid fuels, and in cubic feet for gaseous fuels. [est. in 445031180-P20]
[s. NR 439.04(1)(d), Wis. Adm. Code]

(4) The permittee shall notify the Department when boiler B09 or B11 fires a new alternate fuel at least six weeks prior to initially firing the fuel. As part of the notification, the permittee shall provide an analysis that shows the firing of the fuel meets the requirements of Condition ZZZ.1. [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1]

(5) The permittee shall keep records of:
(a) The date of each internal inspection of the control equipment;
(b) A list of the items inspected; and
(c) Any maintenance or repairs performed as a result of these inspections.
[s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1]

(6) The permittee shall monitor the pressure drop across the multiclone when the device is in operation. [s. NR 439.055(1)(b), Wis. Adm. Code; 14-DMM-191]

(7) The permittee shall keep records of the pressure drop across each multiclone once every 8 hours of source operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055(2)(b)1., Wis. Adm. Code; 14-DMM-191]

(8) The permittee shall keep the following:
(a) A log indicating that the multiclones' hoppers were inspected at least once per shift while the boilers were operating;
(b) Records of any maintenance or repairs performed as a result of the hopper inspections; and
(c) The date and initials of the person performing the maintenance or repairs.
[s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1]

(9) When the bypass stacks are used, the permittee shall keep

B'. Stacks S09, S09Bypass, Boiler B09, Control Devices C06, C07, C7911, C7911DSI:
192.4 million BTU per hour Single Cyclone Power Boiler No 9, installed/last modified in 2016. Controlled by multiclone C06 (1974), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Stack S09, S11Bypass, Boiler B11, Control Devices C11, C07, C7911, C7911DSI:
379.0 million BTU per hour Twin Cyclone Power Boiler No. 11, last modified in 2016. Controlled by multiclone C11 (1966), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Construction Permit 14-DMM-191. The conditions in this Table B' apply after the dry sorbent injection system C7911DSI is constructed and operational.

necessary, of:
(a) The cyclone tubes and side walls of hopper area for erosion;
(b) The gaskets on the clean side tube sheet and high temperature gaskets;
(c) The axial inlet spinner vanes for erosion; and
(d) The solid discharge valve for erosion.
[s. 285.65(3), Wis. Stats.; 99-SDD-109-R1]

(6) The permittee shall perform an inspection of the multiclone hoppers for pluggage and unplug if necessary at least once per shift while the boilers are operating. [s. NR 439.055(5), Wis. Adm. Code, and s. 285.65(3), Wis. Stats.; 99-SDD-109-R1]

(7) The permittee shall perform periodic internal inspections of the baghouse to ensure that the control equipment is operating properly. The time interval between inspections may not exceed twelve (12) months. [s. 285.65(3), Wis. Stats.; 14-DMM-191]

(8) Before January 31, 2017, the permittee shall meet the compliance demonstrations in B'.8.a. [s. 285.65(3), Wis. Stats.; 14-DMM-191]

(9) On and after January 31, 2017, the permittee shall meet the applicable compliance demonstration methods in AAA. [s. 285.65(13), Wis. Stats.; 40 CFR Part 63, Subpart DDDDD; 14-DMM-191]

records of:
(a) Which boiler was using a bypass stack;
(b) The type and amount of fuel fired in the boiler while exhausting to the bypass stack; and
(b) The date and times the bypass stack was used.
[s. NR 439.04(1)(d), Wis. Adm. Code; 14-DMM-191]

(10) Before January 31, 2017, the permittee shall comply with monitoring and recordkeeping requirements in B'.8.b. [s. 285.65(3), Wis. Stats.; 14-DMM-191]

(11) On and after January 31, 2017, the permittee shall comply with the applicable monitoring and recordkeeping requirements in AAA. [s. 285.65(13), Wis. Stats.; 40 CFR Part 63, Subpart DDDDD; 14-DMM-191]

2. Pollutant: Visible Emissions

a. Limitation:
(1) 20% Opacity. The exceptions under s. NR 431.05, Wis. Adm. Code, do apply. [s. NR 431.05, Wis. Adm. Code; 14-DMM-191]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall install, calibrate, maintain and operate a continuous opacity monitor (COM) system for the measurement of opacity in accordance with the performance specifications in 40 CFR part 60, Appendix B, and the requirements in ss. NR 439.09 and 439.095. The permittee shall submit a quality control and quality assurance plan for approval by the Department. The monitor shall follow the QA/QC plan, as approved by the department. [ss. NR 439.095(5)(a)1. and NR 439.095(6), Wis. Adm. Code; 99-SDD-109-R1]	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 99-SDD-109-R1] (2) The permittee shall report quarterly excess emissions in accordance with condition ZZZ.3.b.(3). [s. NR 439.09(10), Wis. Adm. Code; est. in 445031180-P10]

3. Pollutant: Sulfur Dioxide

a. Limitation:
(1) 7 pounds per million BTU averaged over 24 hours and 5.5 pounds per million BTU averaged over 30 days for each boiler. [s. NR 417.07(2)(b), Wis. Adm. Code; 99-SDD-109-R1]

B'. Stacks S09, S09Bypass, Boiler B09, Control Devices C06, C07, C7911, C7911DSI:
192.4 million BTU per hour Single Cyclone Power Boiler No 9, installed/last modified in 2016. Controlled by multiclone C06 (1974), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Stack S09, S11Bypass, Boiler B11, Control Devices C11, C07, C7911, C7911DSI:
379.0 million BTU per hour Twin Cyclone Power Boiler No. 11, last modified in 2016. Controlled by multiclone C11 (1966), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Construction Permit 14-DMM-191. The conditions in this Table B' apply after the dry sorbent injection system C7911DSI is constructed and operational.

(2) Combined emissions from B09 and B11 shall not exceed 3865.4 pounds per hour averaged over any 24 hour period. [s. NR 417.07(5)(b), Wis. Adm. Code; 99-SDD-109-R1]

(3) The sulfur content of the no. 6 fuel oil may not exceed 2.5 percent by weight. [s. NR 417.07(5), Wis. Adm. Code; 99-SDD-109-R1]

(4) The sulfur content of the coal blend may not exceed 4.4 percent by weight. A coal blend is any proportion of coal and petroleum coke. [s. NR 417.07(5), Wis. Adm. Code; 99-SDD-109-R1-OP]

(5) Combined emissions from B09 and B11 shall not exceed 1.7 pounds per million BTU, notwithstanding Condition B'.3.a.(1), if the stack height is between 175 and 290 feet. [s. NR 417.07(5)(b), Wis. Adm. Code; 86-SJK-072]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall calibrate and maintain a sulfur dioxide continuous emission monitor (CEM). [s. NR 417.07(7)(a)1., Wis. Adm. Code; 99-SDD-109-R1] (2) The permittee shall comply with all provisions and requirements as described in Performance Specification 2, 40 CFR Part 60, Appendix B for the CEM system. [s. NR 439.09(2), Wis. Adm. Code; 99-SDD-109-R1] (3) The permittee is exempt from fuel sampling for sulfur content as long as operation of the sulfur dioxide CEM continues to meet the performance specification requirements of s. NR 439.09, Wis. Adm. Code. [s. NR 439.085(1)(c), Wis. Adm. Code; 99-SDD-109-R1]	(1) Whenever compliance emission testing is required for Sulfur Dioxide Emissions, the permittee shall use US EPA Method 6, 6A, 6B or 6C. [s. NR 439.06(2)(a), Wis. Adm. Code; 99-SDD-109-R1] (2) The permittee shall calculate and record the daily average sulfur dioxide emission rate in units of pounds per hour and pounds per million BTU. The average hourly boiler sulfur dioxide emissions shall be calculated for each boiler as shown in the QA/QC plan approved by the department. [ss. NR 439.04(1)(d) and NR 439.04(2), Wis. Adm. Code; 99-SDD-109-R1] (3) For each boiler, the permittee shall calculate and record the 30-day average sulfur dioxide emission rate, in pounds per million BTU, for each consecutive 30-day period. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20] (4) The permittee shall report quarterly excess emissions in accordance with condition ZZZ.3.b.(3). [s. NR 439.09(10), Wis. Adm. Code; est. in 445031180-P10]

B'. Stacks S09, S09Bypass, Boiler B09, Control Devices C06, C07, C7911, C7911DSI:
192.4 million BTU per hour Single Cyclone Power Boiler No 9, installed/last modified in 2016. Controlled by multiclone C06 (1974), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Stack S09, S11Bypass, Boiler B11, Control Devices C11, C07, C7911, C7911DSI:
379.0 million BTU per hour Twin Cyclone Power Boiler No. 11, last modified in 2016. Controlled by multiclone C11 (1966), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Construction Permit 14-DMM-191. The conditions in this Table B' apply after the dry sorbent injection system C7911DSI is constructed and operational.

4. Pollutant: * NR 445 Hazardous Air Pollutant Emissions: Nickel and Formaldehyde

These conditions do not apply on and after January 31, 2017. [s. NR *445.01(1)(b), Wis. Adm. Code; 40 CFR s. 63.6(i)][13]

a. Limitations:
(1) *Before January 31, 2017, the permittee shall control emissions with Best Available Control Technology (BACT) for nickel. BACT shall consist of Current Operating Practices, defined as the following:
(a) Maintain the temperature above 1700 °F, 25 feet above the grate at the centerline of each boiler,
(b) Provide a 0.5 second residence time at a temperature above 1700 °F,
(c) Operate C06, C11 and C07 whenever the boilers operate.
BACT does not apply during periods of boiler startup, shutdown or malfunction.
[s. NR 445.07(1)(c), Wis. Adm. Code; 14-DMM-191]

(2) *Before January 31, 2017, the permittee shall control emissions of formaldehyde with BACT. BACT shall consist of Current Operating Practices defined under condition B'.4.a.(1)(a) to (c). [s. NR *445.07(1)(c), Wis. Adm. Code; 14-DMM-191]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) *Before January 31, 2017, the permittee shall demonstrate compliance with condition B'.4.a.(1)(a) to (c) through flue gas temperature and residence time analysis whenever requested by the Department. [s. NR 407.09(4)(a), Wis. Adm. Code; 14-DMM-191] (2) *Before January 31, 2017, the permittee shall demonstrate compliance through control equipment operation, maintenance, and inspection requirements as stated in the particulate matter emission limitation section for this source. [s. NR 407.09(4)(a), Wis. Adm. Code; 14-DMM-191]	(1) *Before January 31, 2017, the permittee shall maintain documentation demonstrating flue gas temperature and residence time analysis. [s. NR 439.04(1)(d), Wis. Adm. Code; 14-DMM-191] (2) *Before January 31, 2017, the permittee shall keep records of any maintenance or repairs performed as a result of the inspections and maintenance checks. Records shall note the date and initials of the person performing the maintenance or repairs. [s. NR 439.04(1)(d), Wis. Adm. Code; 14-DMM-191]

5. Pollutant: Total Reduced Sulfur

a. Limitation:
(1) Emissions from use of NCG shall not exceed 6645 pounds of SO_2 per month on a 12 month rolling average. [s. NR 417.07(5), Wis. Adm. Code; 99-SDD-109-R1]

(2) The furnace temperature shall be at least 1200 ^{o}F and retention time at least 0.5 seconds. This condition applies to Boiler B11 when burning NCG. [ss. NR 405.02, and 417.06(2), Wis. Adm. Code; 99-SDD-109-R1]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) NCGs shall be routed to either the lime kiln (P12) or No. 11 power boiler (B11) at all times the NCG system is in operation in order to reduce the emissions of TRS. [s. NR 417.06(2), Wis. Adm. Code; 99-SDD-109-R1] (2) The permittee shall demonstrate compliance with Condition B'.5.a.(2) through furnace temperature and residence time analysis for Boiler B11 whenever requested by the Department. [s. NR 407.09(4)(a)1., Wis. Adm. Code; 14-	(1) Whenever compliance emission testing is required for Total Reduced Sulfur Emissions, the permittee shall use US EPA Method 15A, 16, 16A, or 16B, or an alternate method approved in writing by the Department. [s. NR 439.06(7)(a), Wis. Adm. Code; 99-SDD-109-R1-P20] (2) The permittee shall record pulp production rate in terms of air-dry tons of pulp (ADTP) per hour whenever NCGs are burned. [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1]

[13] Per s. NR 445.01(1)(b), Wis. Adm. Code, NR 445 requirements do not apply to pollutants that are regulated by a NESHAP. On and after January 31, 2017, these boilers will comply with the Industrial Boiler NESHAP, 40 CFR Part 63 Subpart DDDDD. While Subpart DDDDD requires compliance by January 31, 2016, the permittee applied for and received a one-year compliance extension as allowed under 40 CFR 63.6(i).

B'. Stacks S09, S09Bypass, Boiler B09, Control Devices C06, C07, C7911, C7911DSI:
192.4 million BTU per hour Single Cyclone Power Boiler No 9, installed/last modified in 2016. Controlled by multiclone C06 (1974), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Stack S09, S11Bypass, Boiler B11, Control Devices C11, C07, C7911, C7911DSI:
379.0 million BTU per hour Twin Cyclone Power Boiler No. 11, last modified in 2016. Controlled by multiclone C11 (1966), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Construction Permit 14-DMM-191. The conditions in this Table B' apply after the dry sorbent injection system C7911DSI is constructed and operational.

DMM-191]	(3) The permittee shall use the average pulp rate (air-dry tons/hr) while NCG is burned along with the emission factor of 5.56 lb/ton of air-dry pulp to determine SO_2 emission from combustion of NCG after connecting condensate tanks T83 and T84 to the LVHC system. [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1] (4) The permittee shall record the NCG combustion start and end times. [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1]

6. Pollutant: Alternate Fuel Use Emissions

a. Limitation:
(1) Tire-derived fuel (TDF) may not supply more than 8.5% of the heat input to the boiler. [s. NR 415.06(1)(b), Wis. Adm. Code; 99-SDD-109-R1]

(2) Petroleum coke may not be burned in a boiler in greater than the percentage of heat input supplied by petroleum coke that demonstrated compliance with applicable emission limitations. [s. NR 415.06(1)(b), Wis. Adm. Code; 99-SDD-109-R1]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) When requested by the Department, the permittee shall sample and analyze fuels, other than coal and residual fuel oil, in a manner specified by the Department. [s. NR 439.085(4), Wis. Adm. Code; 99-SDD-109-R1] (2) The permittee shall calculate the percentage heat input supplied to each boiler from TDF (or other alternate fuel) using the following calculation: $$P = \left[\frac{HC_t * Q_t}{\sum_{i=1}^{n} HC_i * Q_i} \right] * 100$$ where: **P** is the daily average percentage (of heat input supplied to the boiler) of TDF; **HC_t** is the heat content of the TDF used during the day (expressed in BTU per pound); **Q_t** is the amount of TDF used (expressed in pounds) during the day; **n** is the number of fuels fired in the boiler during the day; **I** represents each fuel fired during the day; **HC_i** is the heat content of each individual fuel fired; and **Q_I** is the amount of each individual fuel fired during the day. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code; est. in 445031180-P10] (3) Notwithstanding condition B'.6.b.(2), in any month that combustion of a fuel mix containing TDF does not exceed the average stack opacity measured in the last successful stack test conducted which burned TDF, monthly values may be used to	(1) Whenever an alternate fuel listed in condition B'.6. other than petroleum coke is burned, the permittee shall keep the following records for each fuel co-fired: (a) The daily amount of each fuel consumed, amount (expressed in pounds for solid fuels, thousand gallons for liquid fuels, and million cubic feet for gaseous fuels), (b) The heat content of each fuel (expressed in BTU per pound for solid fuels, BTU per thousand gallons for liquid fuels, and BTU per million cubic feet for gaseous fuels), (c) The daily average percentage of heat input (P) that was supplied to the boiler from TDF for each day of the month (P, expressed in percentage heat input to the boiler). [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1] (2) Notwithstanding condition B'.6.c.(2), in any month that condition B'.6.b.(3) is used, records shall be kept of the monthly amounts of alternate fuel consumed and a monthly average percentage of each alternate fuel's heat input. [s. NR 407.09(1)(c)1.a., Wis. Adm. Code; est. in 445031180-P10] (3)(a) Whenever TDF is used, the permittee shall obtain a grab sample of TDF on a monthly basis, for analysis of heat content. (b) The permittee shall keep on file the contract with its fuel supplier which specifies the maximum allowable weight percent of petroleum coke in the fuel blend burned in Boilers B09 and B11. [s. NR 439.08(3), Wis. Adm. Code; est. in 445031180-P20] (4) The permittee shall keep records of fuel sampling and make it

B'. Stacks S09, S09Bypass, Boiler B09, Control Devices C06, C07, C7911, C7911DSI:
192.4 million BTU per hour Single Cyclone Power Boiler No 9, installed/last modified in 2016. Controlled by multiclone C06 (1974), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Stack S09, S11Bypass, Boiler B11, Control Devices C11, C07, C7911, C7911DSI:
379.0 million BTU per hour Twin Cyclone Power Boiler No. 11, last modified in 2016. Controlled by multiclone C11 (1966), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Construction Permit 14-DMM-191. The conditions in this Table B' apply after the dry sorbent injection system C7911DSI is constructed and operational.

define all variables described in condition B'.6.b.(2). [s. NR 407.09(1)(c)1.a., Wis. Adm. Code; est. in 445031180-P10]	available to the Department upon request. [s. NR 439.04(1)(d), Wis. Adm. Code; 99-SDD-109-R1]

7. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, by 40 CFR Part 63, Subpart DDDDD: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial and Institutional Boilers and Process Heaters

These Requirements Apply On And After January 31, 2017. [40 CFR s. 63.6(i); s. NR 460.05(7), Wis. Adm. Code]

a. Limitations:
(1) The permittee shall comply with ONE of the following:
(a) HCl emissions may not exceed 0.022 lb per MMBtu of heat input; OR
(b) HCl emissions may not exceed 0.025 lb per MMBtu of steam output; OR
(c) HCl emissions may not exceed 0.27 lb per MWh.
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR 63.7500(a)(1); 14-DMM-191]

(2) The permittee shall comply with ONE of the following:
(a) Mercury emissions may not exceed 5.7×10^{-6} lb per MMBtu of heat input; OR
(b) Mercury emissions may not exceed 6.4×10^{-6} lb per MMBtu of steam output; OR
(c) Mercury emissions may not exceed 7.3×10^{-5} lb per MWh.
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR 63.7500(a)(1); 14-DMM-191]

(3) The permittee shall comply with ONE of the following:
(a) Filterable PM emissions may not exceed 0.040 lb per MMBtu of heat input; OR
(b) TSM emissions may not exceed 5.3×10^{-5} lb per MMBtu of heat input; OR
(c) Filterable PM emissions may not exceed 0.042 lb per MMBtu of steam output; OR
(d) Filterable PM emissions may not exceed 0.49 lb per MWh; OR
(e) TSM emissions may not exceed 5.6×10^{-5} lb per MMBtu of steam output; OR
(f) TSM emissions may not exceed 6.5×10^{-4} lb per MWh.
(g) Total selected metals (TSM) means the sum of the following metallic hazardous air pollutants: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR 63.7500(a)(1) and 63.7575; 14-DMM-191]

(4) The permittee shall comply with ONE of the following:
(a) Carbon monoxide emissions may not exceed 160 ppmdv at 3% O_2, based on a three-run average; OR
(b) If a CO CEMS is used, carbon monoxide emissions may not exceed 340 ppmdv at 3% O_2, based on a 30-day rolling average; OR
(c) Carbon monoxide emissions may not exceed 0.14 lb per MMBtu of steam output, based on a three-run average; OR
(d) Carbon monoxide emissions may not exceed 1.7 lb per MWh, based on a three-run average.
[s. 285.65(13), Wis. Stats.; Table 2 to 40 CFR Part 63, Subpart DDDDD; 40 CFR 63.7500(a)(1); 14-DMM-191]

(5) The permittee may use emissions averaging, contained in sections AAA.8. and 14., energy efficiency credits contained in section AAA.14 and output based limits per section AAA.1, to meet the PM (or TSM), HCl, and mercury limits. [40 CFR 63.7522 and 63.7541; 14-DMM-191]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) See applicable compliance demonstration methods in Table AAA. [s. 285.65(13), Wis. Stats.; 40 CFR Part 63, Subpart DDDDD; 14-DMM-191]	(1) See applicable test methods, recordkeeping requirements and monitoring requirements in Table AAA. [s. 285.65(13), Wis. Stats.; 40 CFR Part 63, Subpart DDDDD; 14-DMM-191]

B'. Stacks S09, S09Bypass, Boiler B09, Control Devices C06, C07, C7911, C7911DSI:
192.4 million BTU per hour Single Cyclone Power Boiler No 9, installed/last modified in 2016. Controlled by multiclone C06 (1974), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Stack S09, S11Bypass, Boiler B11, Control Devices C11, C07, C7911, C7911DSI:
379.0 million BTU per hour Twin Cyclone Power Boiler No. 11, last modified in 2016. Controlled by multiclone C11 (1966), electrostatic precipitator C07 (1976), baghouse C7911 (2015) and sorbent injection system C7911DSI (2015).
Construction Permit 14-DMM-191. The conditions in this Table B' apply after the dry sorbent injection system C7911DSI is constructed and operational.

8. Condition Type: Requirements for Baghouse C7911 & ESP C07 that Apply Before January 31, 2017

a. Compliance Demonstration	b. Record keeping, and Monitoring
(1) The ESP shall be equipped with a device to measure the primary and secondary voltage in volts, the primary and secondary current in amps, and the sparking rate, in sparks per minute. [s. NR 439.055(1)(c), Wis. Adm. Code, and s. 285.65(3), Wis. Stats.; 14-DMM-191] (2) The baghouse shall be equipped with a device to measure the pressure drop across the baghouse. [s. NR 439.055(1)(c), Wis. Adm. Code, and s. 285.65(3), Wis. Stats.; 14-DMM-191] (3) The permittee shall perform periodic inspections of the ESP by qualified personnel to ensure that the control equipment is operating properly. The time interval between inspections may not exceed twenty-six (26) months. Compliance tests may not be conducted within six (6) months of a periodic inspection. The periodic inspections shall include but not limited to the inspection, repair, maintenance and cleaning as necessary, of: (a) Electrode wires and bushings; (b) Inlet and outlet ducts for holes or other leakage; (c) Interior of the ESP; (d) Hammer shafts, motors and drive mechanisms; (e) Duct work between the boilers and the ESP. [s. 285.65(3), Wis. Stats.]	(1) The permittee shall monitor the following parameters for the electrostatic precipitator when the device is in operation: (a) The primary and secondary voltage in volts; (b) The primary and secondary current, in amps; and (c) The sparking rate, in sparks per minute. [s. NR 439.055(1)(c), Wis. Adm. Code; 14-DMM-191] (2) When the ESP is in operation, the permittee shall record the primary and secondary voltage in volts, the primary and secondary current in amps, and the sparking rate, in sparks per minute, once for every 8 hours of source operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055(2)(b), Wis. Adm. Code; 14-DMM-191] (3) The permittee shall keep daily records of the operation of each transformer-rectifier (TR) set in the ESP for each day that the ESP operates. The records shall indicate the time and duration when any TR set is not operating while the ESP is in operation. [s. 285.65(3), Wis. Stats. and s. NR 407.09(4)(a), Wis. Adm. Code; 14-DMM-191] (4) When the baghouse is in operation, the permittee shall monitor the pressure drop across the baghouse and record the pressure drop once for every 8 hours of source operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055(1)(a) and (2)(b)1., Wis. Adm. Code; 14-DMM-191] (5) The permittee shall keep records of: (a) The date of each internal inspection of the control equipment; (b) A list of the items inspected; and (c) Any maintenance or repairs performed as a result of these inspections. [s. NR 439.04(1)(d), Wis. Adm. Code] (6) Within 30 days after each inspection of the ESP and duct work required under B'.8.a.(5), the permittee shall submit a report to the Department that contains the findings, conclusions, recommendations and qualifications of the inspector(s). [s. NR 407.09(4)(a), Wis. Adm. Code]

C. S81 B81 96.7 million BTU per hour, 75,000 lb/hr steam at 350 psig, natural gas-fired package boiler. First operated in 1999.[14]

1. Pollutant: Particulate Matter/PM_{10} Emissions

a. Limitation:

(1) Particulate matter emissions may not exceed 0.02 pound per million BTU. [15] [s. 285.65(7), Wis. Stats.; 95-POY-098]

(2) The operational hours may not exceed 200 hours per month averaged over any 12 consecutive months. [s. NR 405.02(27), Wis. Adm. Code, s. 285.65(7), Wis. Stats.; 95-POY-098]

(3) Particulate matter missions may not exceed 0.15 pound of particulate matter per million BTU heat input. [s. NR 415.06(2)(a), Wis. Adm. Code; est. in 445031180-P20]

(4) PM_{10} emissions may not exceed 0.02 pound per million BTU, and 0.73 pound per hour. [s. 285.65(3), Wis. Stats.; s. NR 404.08(2), Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall only use a package boiler with a heat input capacity that does not exceed 96.7 mmBTU per hour. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P10] (2) The permittee shall only burn natural gas in the package boiler. [s. 285.65(3), Wis. Stats.; 95-POY-098]	(1) Whenever particulate matter emissions testing is required, the permittee shall use EPA Method 5 to test for noncondensible particulate matter, and EPA Method 202 to test for condensible particulate matter emissions. [s NR 439.06(1), Wis. Adm. Code; 95-POY-098] (2) Whenever PM_{10} emission testing is required, the permittee shall use one of the following: (a) Emissions testing results generated per Condition C.1.c.(1) above. If this option is chosen, all emissions measured by US EPA Methods 5 and 202 are assumed to be PM_{10}. (b) US EPA Method 201A, and US EPA Method 202 for condensible particulate matter. (c) Alternate methods as approved in advance by the Department. [ss. NR 439.06(1) and (1m), Wis. Adm. Code; est. in 445031180-P20] (3) The permittee shall keep monthly records of: (a) hours of operation, (b) amount of natural gas used, and (c) Average hours of operation per month, averaged over the previous 12 consecutive months. [s. NR 439.04(1)(d), Wis. Adm. Code; 95-POY-098]

2. Pollutant: Visible Emissions

a. Limitation: 20% Opacity [s. NR 431.05, Wis. Adm. Code; 95-POY-098]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) See Condition C.1.b.(2) for particulate matter/PM_{10} emissions. [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 95-POY-098] (2) The permittee shall keep on file records showing which fuels this boiler is capable of firing. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

[14] This is a portable rental unit that is rarely onsite.

[15] On September 25, 1995, the permittee requested a more stringent limit than the limit in s. NR 415.06(2) to avoid PSD applicability.

D. B08 S08 and S10 C03 and C04 206.3 million BTU per hour, No. 8 non-direct contact evaporator recovery boiler. Fired on kraft liquor, No. 6 oil, or natural gas. Last modified 1953. Combined exhaust from B08 and B10 is split and controlled by 2 electrostatic precipitators (ESPs): the A-Side, C04 (Environmental Elements 1988), and the B-Side, C03 (Environmental Elements 1984). C03 exhaust to S08. C04 exhaust to S10.
B10 S08 and S10 C03 and C04 321.7 million BTU per hour, No. 10 NDCE recovery boiler. Fired on kraft liquor or natural gas. Last modified 1961.

1. Pollutant: Particulate Matter Emissions

a. Limitation:

(1) 0.30 pounds per million BTU heat input from Boilers B08 and B10. [s. NR 415.06(1)(b), Wis. Adm. Code; 86-SJK-072]

(2) Particulate matter emissions may not exceed 49.5 pounds per hour from Boilers B08 and B10 combined. [s. 285.65(3), Wis. Stats.; est. in 445031180-P20]

(3) 0.287 pound per million BTU heat input on a 30-day average when the by-pass stack is in operation. [s. 285.64, Wis. Stats.; 86-SJK-072A]

(4) The permittee must ensure that the concentration of particulate matter (PM) in the exhaust gases discharged to the atmosphere from both recovery boilers is less than or equal to 0.036 grains of PM per dry standard cubic foot (gr/dscf) corrected to 8 percent oxygen, unless provided otherwise under condition ZZZ.8.a. [40 CFR §63.862(a)(1)(ii); s. 285.65(13), Wis. Stats.; est. in 445031180-P10]

(5) For Boiler B08, the permittee shall only fire:
(a) Kraft liquor as primary fuel in Boiler B08;
(b) No. 6 fuel oil and natural gas as alternate fuels in Boiler B08, and
(c) other alternate fuels that meet the requirements in Condition ZZZ.1.a.(1).
[s. 285.65(3) Wis. Stats.; 445031180-P01]

(6) For Boiler B10, the permittee shall only fire:
(a) Kraft liquor as primary fuel in Boiler B10;
(b) No. 6 fuel oil and natural gas as alternate fuels in Boiler B10, and
(c) other alternate fuels that meet the requirements in Condition ZZZ.1.a.(1).
[s. 285.65(3) Wis. Stats.; 445031180-P01]

(7) PM_{10} emissions may not exceed 49.5 pounds per hour from Boilers B08 and B10 combined. [s. 285.65(3), Wis. Stats.; s. NR 404.08(2), Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall operate electrostatic precipitators C03 and C04 at all times B08 and B10 are in operation. [s. 285.65(3) Wis. Stats.; Permit 86-SJK-072-R1] (2) The permittee shall operate an electrostatic precipitator control device to control particulate matter emissions whenever either boiler is in operation with the exception of periods of normal startup and shutdown as defined in the startup and shutdown and precipitator procedures. [s. NR 407.09(1)(a), Wis. Adm. Code and s. 285.63(1)(a), Wis. Stats.; est. in	(1) Whenever particulate matter emission testing is required the permittee shall measure and report emissions using all of the following procedures: (a) EPA Methods 5 and 202. Results shall be used to verify compliance with the limitations of conditions D.1.a.(1), (2) and (3). Alternate methods may be used if approved in writing by the Department. [s NR 439.06(1), Wis. Adm. Code] (b) EPA Method 5 as specified under condition ZZZ.8.b.(1), with water used as the cleanup solvent instead of acetone in the sample recovery procedure. Results shall be used to verify compliance with the applicable limitations of conditions D.1.a.(4) and D.6.a. [40 CFR §63.865(b) and s. 285.65(13), Wis. Stats.; est. in 445031180-P10]

D. B08 S08 and S10 C03 and C04 206.3 million BTU per hour, No. 8 non-direct contact evaporator recovery boiler. Fired on kraft liquor, No. 6 oil, or natural gas. Last modified 1953. Combined exhaust from B08 and B10 is split and controlled by 2 electrostatic precipitators (ESPs): the A-Side, C04 (Environmental Elements 1988), and the B-Side, C03 (Environmental Elements 1984). C03 exhaust to S08. C04 exhaust to S10.
B10 S08 and S10 C03 and C04 321.7 million BTU per hour, No. 10 NDCE recovery boiler. Fired on kraft liquor or natural gas. Last modified 1961.

445031180-P01]

(3) The permittee shall perform compliance emission testing for particulate matter every 24 months, as specified under condition ZZZ.2.a.(1). [s. NR 439.075(2)(a)1., Wis. Adm. Code 445031180-P10]

(4) The permittee shall monitor the following parameters for each electrostatic precipitator:
(a) The primary voltage in volts;
(b) The secondary current in amps; and
(c) The sparking rate, in sparks per minute.
[s. NR 439.055(1)(c), Wis. Adm. Code; est. in 445031180-P01]

(5) The permittee shall perform periodic inspections of the ESP by qualified personnel to ensure that the control equipment is operating properly. The time interval between inspections may not exceed eighteen (18) months. The periodic inspections shall include, but not be limited to the inspection, repair, maintenance and cleaning as necessary, of:
(a) Electrode wires and bushings;
(b) Inlet and outlet ducts for holes or other leakage;
(c) Interior of the ESP.
[s. NR 407.09(4)(a)3.b., Wis. Adm. Code; est. in 445031180-P10]

(6) The permittee shall evaluate the rapper settings for the ESP no less than semi-annually and make adjustments to the frequency and intensity if necessary. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code; est. in 445031180-P01]

(7) The ESP by-pass stack may not vent emissions from either B08 or B10 to the atmosphere unless those emissions originate from either natural gas or residual fuel oil combustion. [s. NR 407.09(4)(a), Wis. Adm. Code; s. 285.63(1)(a), Wis. Stats.; Permit 86-SJK-072A]

(8) Compliance Assurance Monitoring (CAM):
(a) Boilers B08 and B10 are pollutant-specific emissions units subject to the CAM

(2) Whenever PM_{10} emission testing is required, the permittee shall use one of the following:
(a) Emissions testing results generated per Condition D.1.c.(1)(a) above. If this option is chosen, all emissions measured by US EPA Methods 5 and 202 are assumed to be PM_{10}.
(b) US EPA Method 201A, and US EPA Method 202 for condensible particulate matter.
(c) Alternate methods as approved in advance by the Department.
[ss. NR 439.06(1) and (1m), Wis. Adm. Code; est. in 445031180-P20]

(3) The permittee shall keep monthly records of:
(a) The type of each fuel fired in the boiler; and
(b) The amount of each fuel fired in the boiler; and
(c) the units for the amount of fuel fired.
[s. NR 439.04(1)(d), Wis. Adm. Code and Permit 86-SJK-072A]

(4) The permittee shall record the ESP parameters once every eight hours whenever the boilers are operated. [s. NR 439.055(2)(b), Wis. Adm. Code; est. in 445031180-P01]

(5) The permittee shall keep records of:
(a) The date and initials of the person(s) performing the internal inspections of the ESP;
(b) A list of the items inspected;
(c) Any maintenance or repairs performed as a result of these inspections;
(d) The findings, conclusions, recommendations and qualifications of the inspector(s).
[s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P10]

(6) The permittee shall keep records of:
(a) The date of the rapper setting evaluations; and
(b) The results of the rapper evaluations.
[s. NR 409.04(a)3.b., Wis. Adm. Code; est. in 445031180-P01]

(7) The permittee shall keep records of:
(a) The date(s) the by-pass stack was used;
(b) The reason(s) emissions were routed through the by-pass stack; and
(c) The fuels that were used when the by-pass stack was in use.
[s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

(8) At least once every eighteen months, within 30 days of the

D. B08 S08 and S10 C03 and C04 206.3 million BTU per hour, No. 8 non-direct contact evaporator recovery boiler. Fired on kraft liquor, No. 6 oil, or natural gas. Last modified 1953. Combined exhaust from B08 and B10 is split and controlled by 2 electrostatic precipitators (ESPs): the A-Side, C04 (Environmental Elements 1988), and the B-Side, C03 (Environmental Elements 1984). C03 exhaust to S08. C04 exhaust to S10.
B10 S08 and S10 C03 and C04 321.7 million BTU per hour, No. 10 NDCE recovery boiler. Fired on kraft liquor or natural gas. Last modified 1961.

requirements of 40 CFR Part 64. The CAM monitoring requirements are fulfilled by complying with conditions D.6.c.(1) and ZZZ.8.a.(4)(a). (b) The indicator range for opacity is 20% or less, based on the average of ten consecutive 6-minute averages. (c) An excursion is any instance where the average of ten consecutive 6-minute averages exceeds 20% opacity. (d) The quality improvement plan (QIP) threshold is five excursions in a six-month period. (e) The permittee shall operate the COMS in accordance with 40 CFR ss. 64.7 and 64.8 as detailed in Conditions ZZZ.10.a.(1) and (2). [s. 285.65(13), Wis. Stats.; 40 CFR ss. 64.3(a) and (d), 64.6(c)(2) and (3), 64.7(c) and 64.8(a); est. in 445031180-P20]	inspection of the ESP and duct work, the permittee shall submit a report to the Department that contains the findings, conclusions, recommendations and qualifications of the inspector(s). [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P10] (9) The permittee shall keep daily records of the operation of each transformer-rectifier (TR) set in the ESPs. The records shall indicate the time and duration when any TR set is not operating and the ESP is in operation. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P10] (10) The permittee shall keep records of the results of each compliance emission test for particulate matter or PM_{10}. [s. NR 439.04(1)(a), Wis. Adm. Code; est. in 445031180-P20] (11) Compliance Assurance Monitoring (CAM): (a) The reporting and recordkeeping requirements in Conditions ZZZ.8.b.(3), ZZZ.8.b.(4)(c), ZZZ.8.b.(7), ZZZ.8.b.(8) and ZZZ.10.a.(3) shall satisfy the CAM reporting requirements of 40 CFR s. 64.9(a)(2)(i) and (ii). (b) The semiannual monitoring report required by Condition ZZZ.3.a.(2) shall include, if applicable, a description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR s. 64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring. (c) The permittee shall keep the records outlined in Condition ZZZ.10.a.(3). [s. 285.65(13), Wis. Stats.; 40 CFR ss. 64.6(c)(3) and 64.9; est. in 445031180-P20]

2. Pollutant: Visible Emissions

a. Limitation: (1) 20% Opacity. [s. NR 431.04(2), Wis. Adm. Code; Permit 86-SJK-072]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall monitor opacity as required by Condition D.6.c.(1). For the purposes of the report required by Condition D.2.c.(2), periods of excess emissions are any 6-minute period during which the average opacity exceeds the emission limit in Condition D.2.a.(1). [ss. NR 407.09(4)(a)1. and NR 439.09(10)(b)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code; est. in 445031180-P01] (2) The permittee shall report quarterly excess emissions in accordance with condition ZZZ.3.b.(1). [ss. NR 439.03(1)(b) and 439.09(10), Wis. Adm. Code; est. in 445031180-P10]

D. B08 S08 and S10 C03 and C04 206.3 million BTU per hour, No. 8 non-direct contact evaporator recovery boiler. Fired on kraft liquor, No. 6 oil, or natural gas. Last modified 1953. Combined exhaust from B08 and B10 is split and controlled by 2 electrostatic precipitators (ESPs): the A-Side, C04 (Environmental Elements 1988), and the B-Side, C03 (Environmental Elements 1984). C03 exhaust to S08. C04 exhaust to S10.
B10 S08 and S10 C03 and C04 321.7 million BTU per hour, No. 10 NDCE recovery boiler. Fired on kraft liquor or natural gas. Last modified 1961.

3. Pollutant: Sulfur Dioxide

a. Limitation:

(1) 466.3 pounds per hour averaged over any consecutive 24-hour period from B08 and B10 in combination. [s. NR 417.07(5), Wis. Adm. Code and Permit 86-SJK-072]

(2) The sulfur content of the no. 6 fuel oil may not exceed 2.5 percent by weight. [s. NR 417.07(5), Wis. Adm. Code and Permit 86-SJK-072]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall perform compliance emission testing for sulfur dioxide every 24 months, as specified under condition ZZZ.2.a (1). [s. NR 439.075(2)(a)2, Wis. Adm. Code; est. in 445031180-P10] (2) The permittee shall calculate and record the daily average sulfur dioxide emission rate in units of pounds per hour. The average hourly sulfur dioxide emissions shall be calculated for both boilers by dividing total sulfur dioxide emissions for each day by the hours of boiler operation for that day. [s. NR 407.09(1)(c)1.b., Wis. Adm. Code; est. in 445031180-P10]	(1) Whenever compliance emission testing is required for Sulfur Dioxide Emissions, US EPA Method 6, 6A, 6B or 6C, or alternate methods approved in writing by the Department, shall be used to demonstrate compliance. [s. NR 439.06(2)(a), Wis. Adm. Code; est. in 445031180-P01] (2) The permittee shall keep records of the following for each day of operation: (a) The number of hours when either Boiler B08 or Boiler B10, or both, were operated. (b) The SO_2 emission factor for each fuel burned, in units of pounds of SO_2 per gallon of fuel OR pounds of SO_2 per air-dry ton of pulp for liquid fuels, and pounds of SO_2 per cubic foot of fuel for gaseous fuels. See Condition D.3.c.(3) for emission factor requirements. (c) The quantity of each fuel burned, in units of gallons for liquid fuels, and cubic feet for gaseous fuels. (d) If using the SO_2 emission factor from AP-42, Table 10.2-1 for kraft liquor, the number of tons of air-dry pulp produced. (e) If the emission factor for a particular fuel depends on the sulfur content of the fuel, the weight percent sulfur content of the fuel. (f) The total sulfur dioxide emissions from all fuels burned, in pounds. Total daily SO_2 emissions shall be determined as follows: (i) Multiply the daily quantity of each fuel burned by the appropriate emission factor, except as provided in Condition D.3.c.(2)(e)(ii) below. (ii) if using the SO_2 emission factor from AP-42, Table 10.2-1 for kraft liquor, multiply the daily quantity of air-dry pulp produced, in tons, by the appropriate emission factor from Table 10.2-1. (iii) Sum the daily SO_2 emissions from each individual fuel burned. (g) The average hourly sulfur dioxide emissions, in pounds per hour, determined by dividing total sulfur dioxide emissions by total hours of operation. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

D. B08 S08 and S10 C03 and C04 206.3 million BTU per hour, No. 8 non-direct contact evaporator recovery boiler. Fired on kraft liquor, No. 6 oil, or natural gas. Last modified 1953. Combined exhaust from B08 and B10 is split and controlled by 2 electrostatic precipitators (ESPs): the A-Side, C04 (Environmental Elements 1988), and the B-Side, C03 (Environmental Elements 1984). C03 exhaust to S08. C04 exhaust to S10.
B10 S08 and S10 C03 and C04 321.7 million BTU per hour, No. 10 NDCE recovery boiler. Fired on kraft liquor or natural gas. Last modified 1961.

	(3) The permittee shall obtain SO_2 emission factors for Condition D.c.(3)(b) from one of the following sources: (a) Conduct SO_2 emissions testing using one of the test methods in Condition D.3.c.(1) and the following test conditions: (i) During emissions testing, burn only one type of fuel. (ii) During emissions testing, record the fuel usage rate, in gallons per hour for liquid fuels, and cubic feet for gaseous fuels. (iii) Determine the emission factor by dividing the sulfur dioxide emission rate during testing, in pounds per hour, by the fuel usage rate during testing, in gallons or cubic feet per hour, as appropriate. (b) Use AP-42 emission factors.[16] (i) The SO_2 emission factor for kraft liquor shall be taken from AP-42, Table 10.2-1. (ii) The SO_2 emission factor for natural gas shall be taken from AP-42, Table 1.4-2. (iii) The SO_2 emission factor for residual fuel oil shall be developed using AP-42, Table 1.3-1. (c) Use other studies or reports if approved by the Department. (d) The permittee shall keep on file the emissions test reports, fuel analyses, calculations and/or other records or information used to develop the emission factors. [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20] (4) The permittee shall keep on file results of all sulfur dioxide emissions testing. [s. NR 439.04(1)(a), Wis. Adm. Code; est. in 445031180-P20]
4. Pollutant: *Formaldehyde	
a. *Limitation: (1) *BACT - current operating practices and the operation of the control equipment whenever the boiler is in operation. [17] [s. NR *445.07(1)(c), Wis. Adm. Code; est. in 445031180-P01]	
b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) * The permittee shall demonstrate compliance with the Hazardous Air Pollutant limitation through flue gas temperature and residence time analysis whenever requested by the Department. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-	(1) * The permittee shall maintain current documentation demonstrating flue gas temperature and residence time analysis. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P01] (2) * The permittee shall use methods and plans approved, in

[16] AP-42 is the Compilation of Air Pollutant Emission Factors, available at the website https://www3.epa.gov/ttn/chief/ap42/index.html

[17] Control equipment which can be utilized by a facility to control HAP emissions include: adsorbers (such as activated carbon), absorbers (such as wet scrubbers and spray towers), and incinerators for VOC based HAPs. It was found that this boiler operates under the conditions consistent with high temperature incinerators.

D. B08 S08 and S10 C03 and C04 206.3 million BTU per hour, No. 8 non-direct contact evaporator recovery boiler. Fired on kraft liquor, No. 6 oil, or natural gas. Last modified 1953. Combined exhaust from B08 and B10 is split and controlled by 2 electrostatic precipitators (ESPs): the A-Side, C04 (Environmental Elements 1988), and the B-Side, C03 (Environmental Elements 1984). C03 exhaust to S08. C04 exhaust to S10.
B10 S08 and S10 C03 and C04 321.7 million BTU per hour, No. 10 NDCE recovery boiler. Fired on kraft liquor or natural gas. Last modified 1961.

P01]	writing, by the Department for compliance emission testing of HAP emissions. [ss. NR 407.09(1)(c)1.b. and 439.06(8), Wis. Adm. Code; est. in 445031180-P01]

5. Pollutant: Total Reduced Sulfur (TRS)

a. Limitation: (1) The emission of TRS from all recovery furnaces may not exceed 0.50 pound of reduced sulfur compounds (as sulfur) per equivalent ton of airdried kraft pulp, or from each recovery furnace stack 17.5 ppm, expressed as hydrogen sulfide on a dry gas basis, whichever is more restrictive. [s. NR 417.06(1), Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall perform compliance emission testing for total reduced sulfur every 24 months, as specified under Condition ZZZ.2.a.(1). [s. NR 439.075(2)(a)3., Wis. Adm. Code; est. in 445031180-P10]	(1) Whenever compliance emission testing is required for Total Reduced Sulfur Emissions, the permittee shall use US EPA Method 15A, 16, 16A, or 16B. [s. NR 439.06(7)(a), Wis. Adm. Code; est. in 445031180-P01] (2) The permittee shall keep on file results of all TRS emissions testing. [s. NR 439.04(1)(a), Wis. Adm. Code; est. in 445031180-P20]

6. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, by 40 CFR Part 63, Subpart MM: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources at Kraft Pulp Mills

a. Limitation:

(1) The permittee must ensure that the concentration of particulate matter (PM) in the exhaust gases discharged to the atmosphere from both recovery boilers is less than or equal to 0.036 grains of PM per dry standard cubic foot (gr/dscf) corrected to 8 percent oxygen, unless provided otherwise under condition ZZZ.8.a. [40 CFR §63.862(a)(1)(ii); s. 285.65(13), Wis. Stats.; est. in 445031180-P10]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) See requirements in Conditions ZZZ.8.a.(4)(a) and ZZZ.8.a.(5)(a). [s. 285.65(13), Wis. Stats.; 40 CFR ss. 63.864(k)(1) and (2); est. in 445031180-P20]	(1) On each stack that exhausts a recovery boiler and is equipped with an ESP, the permittee must install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS). As specified in 40 CFR §63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. The COMS data must be reduced as specified in 40 CFR §§63.8(g)(2). [40 CFR §63.864(d) and s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (2) The permittee shall comply with the requirements in Conditions ZZZ.8.b.(1) through (9). [s. 285.65(13), Wis. Stats.; 40 CFR ss. 63.865(b), 63.866(a), (b) and (c), and 63.867(b)(3) and (c); est. in 445031180-P20]

E. Stack S05 P08 C18 The No. 8 smelt dissolving tank makes green liquor from molten black liquor (smelt from recovery boiler B08) and weak wash. Last modified in 1953. P08 is controlled by scrubber C05 (1975).

Stack S06 P10 C19 The No. 10 smelt dissolving tank makes green liquor from molten black liquor (smelt from recovery boiler B10) and weak wash. Last modified in 1961. P10 is controlled by scrubber C10 (1975).

These conditions apply to each process individually unless otherwise indicated.

1. Pollutant: Particulate Matter and PM_{10} Emissions

a. Limitations:

(1) PM_{10} emissions from Process P08 may not exceed 4.46 pounds per hour. [s. NR 404.08(2), Wis. Adm. Code; s. 285.65(3), Wis. Stats.; est. in 445031180-P20]

(2) PM_{10} emissions from Process P10 may not exceed 5.66 pounds per hour. [s. NR 404.08(2), Wis. Adm. Code; s. 285.65(3), Wis. Stats.; est. in 445031180-P20]

(3) Particulate matter emissions from Processes P08 and P10 may not exceed 0.40 pounds per 1000 pounds of exhaust gas. [s. NR 415.05(1)(o), Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1)(a) The permittee shall operate Scrubber C05 at all times that Process P08 is in operation except during times of routine purging or emergency. (b) The permittee shall operate Scrubber C10 at all times that Process P10 is in operation except during times of routine purging or emergency. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P20] (2) During times of routine purging or emergency, the permittee may not utilize the scrubber by-pass for more than (a) 38 hours per month and (b) 8 consecutive hours. If it takes longer to correct the equipment malfunction, the permittee shall remove the black liquor spray from the boiler and burn down the bed. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P01] (3) The permittee shall perform periodic inspections of scrubbers C05 and C10 to ensure that the control equipment is operating properly, as well as perform maintenance and repairs as necessary. The time interval between inspections may not exceed eighteen (18) months. The periodic inspections shall include, but not be limited to inspections and repair or maintenance as necessary, of: (a) spray nozzle for signs of corrosion and build up; (b) Inlet and outlet ducts for clogging and for holes or other leakage; (c) Pumping system including the suction pipe, and	(1) Whenever particulate matter emission testing is required, the permittee shall measure and report emissions using all of the following procedures: (a) EPA Methods 5 and 202. Results shall be used to verify compliance with the limitation of condition E.1.a.(1), (2) and (3). Alternate methods may be used if approved in writing by the Department. [s. NR 439.06(1), Wis. Adm. Code; est. in 445031180-P20] (b) EPA Method 5 as specified under condition ZZZ.8.b.(1), with water used as the cleanup solvent instead of acetone in the sample recovery procedure. Results shall be used to verify compliance with the applicable limitations of condition E.4.a.(1). [40 CFR §63.865(b) and s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (2) Whenever PM_{10} emission testing is required, the permittee shall use one of the following: (a) Emissions testing results generated per Condition E.1.c.(1)(a) above. If this option is chosen, all emissions measured by US EPA Methods 5 and 202 are assumed to be PM_{10}. (b) US EPA Method 201A, and US EPA Method 202 for condensible particulate matter. (c) Alternate methods as approved in advance by the Department. [ss. NR 439.06(1) and (1m), Wis. Adm. Code; est. in 445031180-P20] (3) The permittee shall keep records of times when the scrubber by-pass was utilized which include the number of hours per month and the reason for use. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P01] (4) The permittee shall keep records of:

E. Stack S05 P08 C18 The No. 8 smelt dissolving tank makes green liquor from molten black liquor (smelt from recovery boiler B08) and weak wash. Last modified in 1953. P08 is controlled by scrubber C05 (1975).
Stack S06 P10 C19 The No. 10 smelt dissolving tank makes green liquor from molten black liquor (smelt from recovery boiler B10) and weak wash. Last modified in 1961. P10 is controlled by scrubber C10 (1975).
These conditions apply to each process individually unless otherwise indicated.

pumping system valves; and (d) Mist eliminator (umbrella) for signs of corrosion and build up. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P20] (4) Compliance Assurance Monitoring (CAM): (a) The smelt dissolving tanks P08 and P10 are pollutant-specific emissions units subject to the CAM requirements of 40 CFR Part 64. The CAM monitoring requirements are fulfilled by complying with conditions E.4.b.(1), (2) and (3) and E.4.c.(2) and (3). (b) An excursion for pressure drop or water flow rate is any three-hour block average less than the applicable minimum value in Condition E.4.b.(1) or E.4.b.(2). (c) The quality improvement plan (QIP) threshold is five excursions in a six-month period. (d) The permittee shall operate the pressure drop monitoring and water flow rate monitoring in accordance with 40 CFR ss. 64.7 and 64.8 as detailed in Conditions ZZZ.10.a.(1) and (2). [s. 285.65(13), Wis. Stats.; 40 CFR ss. 64.3(a), 64.6(c)(2) and (3), 64.7(c) and 64.8(a); est. in 445031180-P20]	(a) The date and initials of the person performing the inspections of the scrubber; (b) A list of the items inspected; and (c) Any maintenance or repairs performed as a result of these inspections. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P01] (5) Compliance Assurance Monitoring (CAM): (a) The reporting and recordkeeping requirements in Conditions ZZZ.8.b.(3), ZZZ.8.b.(4)(c), ZZZ.8.b.(7), ZZZ.8.b.(8) and ZZZ.10.a.(3) shall satisfy the CAM reporting requirements of 40 CFR s. 64.9(a)(2)(i) and (ii). (b) The semiannual monitoring report required by Condition ZZZ.3.a.(2) shall include, if applicable, a description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR s. 64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring. (c) The permittee shall keep the records outlined in Condition ZZZ.10.a.(3). [s. 285.65(13), Wis. Stats.; 40 CFR ss. 64.6(c)(3) and 64.9; est. in 445031180-P20]

2. Pollutant: Visible Emissions

a. Limitation: 20% Opacity [s. NR 431.04(2), Wis. Adm. Code; est. in 445031180-P01]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) See Conditions E.1.b.(1), (2), (3) and (4). [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code; est. in 445031180-P01] (2) See Conditions E.1.c.(3), (4) and (5) for particulate matter emissions. [ss. NR 439.04(1)(d) and 439.055(1)(e), Wis. Adm. Code; est. in 445031180-P20]

3. Pollutant: *NR 445 Hazardous Air Pollutant Emissions (formaldehyde)

a. Limitation:
(1) *Control emissions of formaldehyde with Best Available Control Technology (BACT). BACT is defined as the use of current scrubbing control equipment. Weak wash, raw water, or equivalent scrubbing medium shall be used at all times the scrubber is in operation except during times of routine purging or emergency.
[s. NR *445.07(1)(c), Wis. Adm. Code; est. in 445031180-P20]

E. Stack S05 P08 C18 The No. 8 smelt dissolving tank makes green liquor from molten black liquor (smelt from recovery boiler B08) and weak wash. Last modified in 1953. P08 is controlled by scrubber C05 (1975).

Stack S06 P10 C19 The No. 10 smelt dissolving tank makes green liquor from molten black liquor (smelt from recovery boiler B10) and weak wash. Last modified in 1961. P10 is controlled by scrubber C10 (1975).

These conditions apply to each process individually unless otherwise indicated.

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) See Conditions E.1.b.(1), (2), (3), (4) and (5). [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever formaldehyde emissions testing is required, the permittee shall use methods approved in advance by the Department. [s. NR 439.06(8), Wis. Adm. Code; est. in 445031180-P20] (2) The permittee shall keep records of times of routine purging and emergency when scrubbing medium is not used in the process. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P10]

4. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, by 40 CFR Part 63, Subpart MM: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources at Kraft Pulp Mills

a. Limitation:

(1) The permittee must ensure that the concentration of particulate matter (PM) in the exhaust gases discharged to the atmosphere from both smelt dissolving tanks is less than or equal to 0.246 pounds of PM per dry ton of black liquor solids fired, unless provided otherwise under Condition ZZZ.8.a.(1). [40 CFR §63.862(a)(1)(ii); s. 285.65(13), Wis. Stats.; est. in 445031180-P10]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall maintain the 3-hour average pressure drop across each scrubber at no less than 4.9 inches of water, unless the exceedance is excused or an alternate range is approved under the conditions in Section ZZZ.8.a. [40 CFR §63.864(j); s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (2) The permittee shall maintain a 3-hour average scrubbing liquid flow rate to wet scrubber C05 of no less than 30 gallons per minute, unless the exceedance is excused or an alternate range is approved under Section ZZZ.8.a. [40 CFR §63.864(j); s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (3) The permittee shall maintain a 3-hour average scrubbing liquid flow rate to wet scrubber C10 of no less than 35 gallons per minute, unless the exceedance is excused or an alternate range is approved under condition ZZZ.8.a. [40 CFR §63.864(j); s. 285.65(13), Wis. Stats.; est. in 445031180-P10]	(1) EPA Method 5 and other procedures as specified under condition ZZZ.8.b.(1), with water used as the cleanup solvent instead of acetone in the sample recovery procedure, shall be used to verify compliance with the limitation in condition E.4.a.(1). [40 CFR §63.865(b) and s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (2) On each stack that exhausts a smelt dissolving tank and is equipped with a wet scrubber, the permittee must install, calibrate, maintain, and operate a continuous parameter monitoring system (CPMS) to determine and record the pressure drop across the scrubber and the scrubbing liquid flow rate using the procedures in 40 CFR §63.8(c), and the following procedures: (a) The monitoring device used for the continuous measurement of the pressure drop of the gas stream across the scrubber must be certified by the manufacturer to be accurate to within a gage pressure of $\pm$ 2 inches of water gage pressure; (b) The monitoring device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within $\pm$ 5 percent of the design scrubbing liquid flow rate.

E. Stack S05 P08 C18 The No. 8 smelt dissolving tank makes green liquor from molten black liquor (smelt from recovery boiler B08) and weak wash. Last modified in 1953. P08 is controlled by scrubber C05 (1975).
Stack S06 P10 C19 The No. 10 smelt dissolving tank makes green liquor from molten black liquor (smelt from recovery boiler B10) and weak wash. Last modified in 1961. P10 is controlled by scrubber C10 (1975).
These conditions apply to each process individually unless otherwise indicated.

(4) See additional requirements in Conditions ZZZ.8.a.(4)(b) and (5)(b), and ZZZ.8.b.(2). [40 CFR ss. 63.864(k)(1) and (2) and 63.866(b); s. 285.65(13), Wis. Stats.; est. in 445031180-P10]	[40 CFR §63.864(e); s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (3) The permittee shall comply with the requirements in Conditions ZZZ.8.b.(1) through (9). [s. 285.65(13), Wis. Stats.; 40 CFR ss. 63.865(b), 63.866(a), (b) and (c), and 63.867(b)(3) and (c); est. in 445031180-P20]

F. Stack S12 P12 C13: Lime Kiln rated at 135 tons per day lime output, controlled by wet scrubber C13, equipped with a Continuous Emission Monitor for total reduced sulfur. Last modified in 1986.

1. Pollutant: Particulate Matter and PM_{10} Emissions

a. Limitation:

(1) Emit particulate matter in an amount less than or equal to the following:
(a) 0.066 gr/dscf corrected to 10% oxygen when gaseous fossil fuel is burned,
(b) 0.13 gr/dscf corrected to 10% oxygen when liquid fossil fuel is burned.
Note: these NSPS limits are based on measurements of front-half PM only.
[40 CFR s. 60.282(a)(3); s. 285.65(13), Wis. Stats.; s. NR 440.45(3)(a)3., Wis. Adm. Code; Permit 86-SJK-024A]

(2) The permittee may not cause, allow or permit emissions of particulate matter to the ambient air in excess of the most restrictive of the following:
(a) 0.20 pounds of particulate matter per 1,000 pounds of gas.
(b) The emission limit given by the equation $E=3.59P^{0.62}$, where E is the allowable emissions from Process P12 in pounds per hour and P is the process weight rate in tons per hour. If the calculated emission rate for Process P12 is less restrictive than the applicable concentration specified in Condition F.1.a.(2)(a) based on the maximum exhaust flow rate and normal exhaust gas temperature, the limitation in Condition F.1.a.(2)(a) shall apply.
[ss. NR 415.05(1)(k) and NR 415.05(2), Wis. Adm. Code; est. in 445031180-P20]

(3) PM_{10} emissions may not exceed 13.8 pounds per hour. [s. NR 404.08(2), Wis. Adm. Code; s. 285.65(3), Wis. Stats.; est. in 445031180-P20]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The facility shall install, calibrate, maintain and operate a device for measuring the mass rate of lime mud to the kiln. The measuring device shall be accurate within plus or minus 5% of the mass rate over its operating range. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code; est. in 445031180-P10] (2) The facility shall operate process P12 as follows unless authorized otherwise, in writing, by the department: (a) burn only natural gas or residual fuel oil as fuel, (b) operate C13 at all times P12 is in operation.	(1) Whenever particulate matter emission testing is required, the permittee shall measure and report emissions using the following procedures in the order listed: (a) For compliance with the emission limitations in Condition F.1.a.(1): (i) US EPA Method 5 shall be used to determine particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dry standard cubic meters (31.8 dry standard cubic feet). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. The particulate concentration shall be corrected to the appropriate oxygen concentration according to 40 CFR s. 60.284(c)(3). (ii) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The gas sample shall be taken at the same time and at the same traverse points as the particulate sample.

F. Stack S12 P12 C13: Lime Kiln rated at 135 tons per day lime output, controlled by wet scrubber C13, equipped with a Continuous Emission Monitor for total reduced sulfur. Last modified in 1986.	
[Permit 86-SJK-024A, s. NR 407.09(4)(a)3.b., Wis. Adm. Code; est. in 445031180-P10] (3) At all times, including periods of startup, shutdown and malfunction, the permittee shall, to the extent practicable, maintain and operate C13 and P12 in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR s. 60.11(d); s. 285.65(13), Wis. Stats.; s. NR 440.11(4), Wis. Adm. Code; est. in 445031180-P10] (4) The permittee shall perform compliance emission testing for particulate matter every 24 months, as specified under Condition ZZZ.2.a.(1). [s. NR 439.075(2)(a)1., Wis. Adm. Code; est. in 445031180-P10] (5) The permittee shall perform periodic inspections of the scrubber to ensure that the control equipment is operating properly. The time interval between inspections may not exceed eighteen (18) months. The periodic inspections shall include, but not be limited to inspections and repair or maintenance as necessary, of: (a) spray nozzle for signs of corrosion and build up; (b) Inlet and outlet ducts for clogging and for holes or other leakage; (c) Pumping system including the suction pipe and pumping system valves; and (d) Mist eliminator for signs of corrosion and build up. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P01] (6) <u>Compliance Assurance Monitoring (CAM):</u> (a) The lime kiln P12 is a pollutant-specific emissions unit subject to the CAM requirements of 40 CFR Part 64. The CAM monitoring requirements are fulfilled by complying with Conditions F.7.b.(2) and (3) and F.7.c.(1). (b) An excursion for liquid pressure, air pressure or liquid flow rate is any three-hour block average less than the	(iii) Method 17 may be used as an alternative to Method 5 if a constant value of 0.004 gr/dscf is added to the results of Method 17 and the stack temperature is no greater than 400^{o} F. [40 CFR ss. 60.285(b)(1) and (2) and 60.285(f)(1); s. 285.65(13), Wis. Stats.; ss. NR 440.45(6)(b)1. and 2. and (f)1., Wis. Adm. Code; est. in 445031180-P20] (b) For compliance with the emission limitations in Conditions F.7.a.(1)(a) and (b): the permittee shall use US EPA Method 5 as specified under condition ZZZ.8.b.(1), with water used as the cleanup solvent instead of acetone in the sample recovery procedure. [40 CFR §63.865(b); s. 285.65(13), Wis. Stats.; est. in 445031180-P20] (c) For compliance with the applicable limitation in Condition F.1.a.(2): The permittee shall use US EPA Methods 5 and 202 with acetone used as the cleanup solvent after the water rinses in the front half sample recovery procedure. Alternate test methods may be used if approved in writing by the Department. [s. NR 439.06(1), Wis. Adm. Code; est. in 445031180-P20] (2) Whenever PM_{10} emissions testing is required, the permittee shall use one of the following: (a) Emissions testing results generated per Condition F.1.c.(1)(c) above. If this option is chosen, all emissions measured by US EPA Methods 5 and 202 are assumed to be PM_{10}. (b) US EPA Method 201A, and US EPA Method 202 for condensible particulate matter. (c) Alternate methods approved in advance by the Department. [ss. NR 439.06(1) and (1m), Wis. Adm. Code; est. in 445031180-P20] (3) The permittee shall maintain a daily record of the amount of each fuel burned per hour of source operation. [40 CFR §63.862(a)(1)(ii); s. 285.65(13), Wis. Stats.; s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P10] (4) The permittee shall keep records of: (a) The date of each inspection of the wet scrubber, (b) A list of the items inspected, and (c) Any maintenance or repairs performed as a result of these inspections. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P10] (5) The permittee shall follow the monitoring requirements for wet scrubber C13 listed in Condition F.7.c.(1). [40 CFR ss. 60.13(i) and 60.284(b)(2); s. 285.65(13), Wis. Stats.; ss. NR 440.13(9) and NR 440.45(5)(b)2., Wis. Adm. Code; est. in 445031180-P20] (6) The permittee shall keep on file results of all particulate matter emissions testing. [s. NR 439.04(1)(a), Wis. Adm. Code; est. in 445031180-P20] (7) <u>Compliance Assurance Monitoring (CAM)</u>:

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applicable minimum value in Condition F.7.b.(2) or F.7.b.(3). (c) The quality improvement plan (QIP) threshold is five excursions in a six-month period. (d) The permittee shall operate the liquid pressure monitoring, air pressure monitoring and liquid flow rate monitoring in accordance with 40 CFR ss. 64.7 and 64.8 as detailed in Conditions ZZZ.10.a.(1) and (2). [s. 285.65(13), Wis. Stats.; 40 CFR ss. 64.3(a), 64.6(c)(2) and (3), 64.7(c) and 64.8(a); est. in 445031180-P20]	(a) The reporting and recordkeeping requirements in Conditions ZZZ.8.b.(3), ZZZ.8.b.(4)(c), ZZZ.8.b.(7), ZZZ.8.b.(8) and ZZZ.10.a.(3) shall satisfy the CAM reporting requirements of 40 CFR s. 64.9(a)(2)(i) and (ii). (b) The semiannual monitoring report required by Condition ZZZ.3.a.(2) shall include, if applicable, a description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR s. 64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring. (c) The permittee shall keep the records outlined in Condition ZZZ.10.a.(3). [s. 285.65(13), Wis. Stats.; 40 CFR ss. 64.6(c)(3) and 64.9; est. in 445031180-P20]
2. Pollutant: Visible Emissions	
a. Limitation: (1) 20% Opacity. [s. NR 431.05, Wis. Adm. Code]	
b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) See Conditions F.1.b.(2), (3), (5) and (6). [s. NR 407.09(4)(a).1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code; est. in 445031180-P01] (2) See Conditions F.1.c.(3), (4) and (5). [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]
3. Pollutant: Sulfur Dioxide	
a. Limitation: (1)(a) 1.55 pounds per ton of lime produced. (b) 8.71 pounds per hour. [s. 285.65(7), Wis. Stats.; 86-SJK-024A] (2) The sulfur content of the No. 6 fuel oil shall not exceed 2.7 percent by weight. [ss. 285.65(7), Wis. Stats.; 86-SJK-024A] (3) Process P12 may not emit from any stack more than 1.5 pounds of sulfur dioxide per million Btu heat input. [s. NR 417.07(3)(b), Wis. Adm. Code; est. in 445031180-P20]	
b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) Within 90 days of June 26, 2016, the permittee shall conduct sulfur dioxide emissions testing to determine compliance with the emission limits in Conditions F.3.a.(1) and (3). Testing shall be conducted as follows: (a) Testing shall be conducted while Process P12 is operating at capacity or as close to capacity as practicable. (b) During testing, Process P12 shall be used to control NCG from Process P17. (e) During testing, the permittee shall	(1) Whenever compliance emission testing is required for Sulfur Dioxide Emissions, US EPA Method 6, 6A, 6B, 6C or an alternate method approved in writing by the Department shall be used. [s. NR 439.06(2)(a), Wis. Adm. Code; est. in 445031180-P20] (2) The report on the testing required in Condition F.3.b.(1) shall contain the following information: (a) The lime production rate during each sampling period. (b) The sulfur content and Btu content of the No. 6 fuel oil used during testing. (c) For the test while firing No. 6 fuel oil, the rate of No.6 fuel oil use during each sampling period.

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continuously monitor and record the amount of lime produced, in tons per hour. (c) The permittee shall complete two sulfur dioxide emissions tests. (i) During one test, Process P12 shall fire No. 6 fuel oil at the maximum rate. The test shall consist of three repetitions of the test method selected, as described in s. NR 439.07(8)(c), Wis. Adm. Code. The rate of No. 6 fuel oil use shall be recorded for each sampling period. The sulfur content and Btu content of the No. 6 fuel oil used during testing shall be recorded. (ii) During the other test, Process P12 shall fire natural gas. The test shall consist of three repetitions of the test method selected, as described in s. NR 439.07(8)(c), Wis. Adm. Code. (f) Based on the results of sulfur dioxide emissions testing, the permittee shall determine two sulfur dioxide emission factors for Process P12. One emission factor shall be based on the results of testing while burning No. 6 fuel oil. The other emission factor shall be based on the results of testing while burning natural gas. The emission factors may be in terms of pounds of sulfur dioxide per ton of lime produced. With approval of the Department, the permittee may develop emission factors based on a different operational variable, if that operational variable was monitored during emissions testing that demonstrated compliance with the emission limits in Conditions F.3.a.(1) and (3). [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20] (2) Subsequent sulfur dioxide emissions testing shall be conducted once every four years from the date of the original test. [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20] (3) The permittee shall keep the records required in Conditions F.3.c.(4) and (5). [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(d) Calculations showing how the emission factors for sulfur dioxide while firing No. 6 fuel oil and while firing natural gas were determined. (e) If the permittee plans to use an operational variable other than tons of lime produced to develop sulfur dioxide emission factors, the values of that operational variable during each sampling period. [s. NR 439.04(1)(a), Wis. Adm. Code; est. in 445031180-P20] (3) The permittee shall keep on file results of all sulfur dioxide emissions testing. [s. NR 439.04(1)(a), Wis. Adm. Code; est. in 445031180-P20] (4) The permittee shall keep the following records for each day of operation: (a) Hours that Process P12 operated. (b) Total amount of lime produced, in tons. (c) Amount of No. 6 fuel oil used, in gallons. (d) Btu content of No. 6 fuel oil used, in million Btus per 1000 gallons. (e) Daily average sulfur dioxide emissions, in pounds per ton of lime produced. (f) Daily average sulfur dioxide emissions, in pounds per hour. (g) For each day when No. 6 fuel oil is used, sulfur dioxide emissions in pounds per million Btu of heat input from No. 6 fuel oil. (h) Identification of the emission factors that were used to calculate sulfur dioxide emissions. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20] (5) See testing, reporting, and recordkeeping requirements for residual oil in Condition ZZZ.5. [s. NR 417.07(7)(a)4., Wis. Adm. Code; est. in 445031180-P10]

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4. Pollutant: Nitrogen Oxides

a. Limitation:
(1)(a) 1.58 pounds per ton of lime produced.
(b) 8.90 pounds per hour.
[s. 285.65(7), Wis. Stats.; 86-SJK-024A] [18]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1)(a) Within 90 days of June 26, 2016 and every four years thereafter, the permittee shall perform stack testing for nitrogen oxides. (b) During each test run, the permittee shall record the amount of each fuel burned and the amount of lime produced, in tons. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code; est. in 445031180-P20] (2) The permittee shall keep the records required in Conditions F.4.c.(2) and (3). [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever compliance emission testing is required for nitrogen oxides, US EPA Method 7, 7A, 7B or 7C, or an alternate method approved in writing by the Department, shall be used to demonstrate compliance. [s. NR 439.06(6)(a), Wis. Adm. Code; est. in 445031180-P10] (2) The permittee shall keep the following records: (a) Results of the most recent nitrogen oxides emissions test. (b) The nitrogen oxide emission factor, in pounds of nitrogen oxides per ton of lime produced, based on the most recent nitrogen oxides emissions test. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20] (3) The permittee shall keep the following records for each day of operation: (a) Hours that Process P12 operated. (b) Total amount of lime produced, in tons. (c) Daily average nitrogen oxide emissions, in pounds per ton of lime produced. (d) Daily average nitrogen oxide emissions, in pounds per hour. (e) Identification of the emission factors that were used to calculate nitrogen oxide emissions. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

5. Pollutant: *Formaldehyde

a. * Limitation:
(1) *BACT - current operating practices whenever the lime kiln is in operation. [s. NR *445.07(1)(c), Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) *The permittee shall demonstrate compliance with the Hazardous Air Pollutant limitation through flue gas temperature and residence time analysis whenever requested by the Department. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P01]	(1) *The permittee shall maintain current documentation demonstrating flue gas temperature and residence time analysis. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P01] (2) *Whenever formaldehyde emission testing is required, the permittee shall use methods and plans approved, in writing, by the Department. [ss. NR 407.09(1)(c)1.b. and 439.06(8), Wis. Adm. Code; est. in 445031180-P20]

[18] These limitations are set to insure that the emissions increase from the 1986 lime kiln project remain below 40 tons per year, and the federal prevention of significant deterioration requirements under chapter NR 405 do not apply.

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6. Pollutant: Total Reduced Sulfur (TRS)

a. Limitation: (1) The permittee may not cause to be discharged into the atmosphere any gases which contain TRS in excess of 8.0 parts per million by volume on a dry basis, corrected to 10% oxygen, based on a 12-hour average. [40 CFR s. 60.283(a)(5); s. 285.65(13), Wis. Stats.; s. NR 440.45(4)(a)5., Wis. Adm. Code; est. in 445031180-P10]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) NCGs from the digester and multiple-effect evaporators shall be routed to either the lime kiln (P12) or no. 11 power boiler (B11) at all times the systems are in operation in order to reduce the emissions of TRS. The reduction of TRS emissions shall be equal to the reduction achieved by thermal oxidation. [ss. NR 407.09(4)(a), and 417.06(2), Wis. Adm. Code; est. in 445031180-P01] (2) The permittee shall calibrate, maintain and operate continuous monitoring systems to continuously monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the atmosphere from any lime kiln. These systems shall be located downstream of the control device(s) and the spans of these continuous monitoring system(s) shall be set: (a) At a TRS concentration of 30 ppm for the TRS continuous monitoring system. (b) At 25 percent oxygen for the continuous oxygen monitoring system. [40 CFR s. 60.284(a)(2); s. 285.65(13), Wis. Stats.; s. NR 440.45(5)(a)2., Wis. Adm. Code; est. in 445031180-P20] (3) The procedures under 40 CFR s. 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems required under this section. All continuous monitoring systems shall be operated in accordance with the applicable procedures under Performance Specifications 3, and 5 of 40 CFR Part 60, appendix B. [40 CFR ss. 60.13(f) and 60.284(f) ; s. 285.65(13), Wis. Stats.; ss. NR 440.13(6) and NR 440.45(5)(f), Wis. Adm. Code; est. in 445031180-P20]	(1) The permittee shall determine compliance with the TRS standard in 40 CFR s. 60.283(a)(5) as follows: (a) Method 16 shall be used to determine the TRS concentration. The TRS concentration shall be corrected to the appropriate oxygen concentration using the procedure in 40 CFR s. 60.284(c)(3). The sampling time shall be at least 3 hours, but no longer than 6 hours. (b) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The sample shall be taken over the same time period as the TRS samples. (c) In place of Method 16, Method 16A or 16B may be used. [40 CFR ss. 60.285(d)(1) and (2) and 60.285(f)(2); s. 285.65(13), Wis. Stats.; ss. NR 440.45(6)(d)1. and 2. and (f)2., Wis. Adm. Code; est. in 445031180-P20] (2) The permittee shall perform the following: (a) Calculate and record on a daily basis 12-hour average TRS concentrations for the two consecutive periods of each operating day. Each 12-hour average shall be determined as the arithmetic mean of the appropriate 12 contiguous 1-hour average total reduced sulfur concentrations provided by each continuous monitoring system installed under 40 CFR s. 60.284(a)(2). (b) Calculate and record on a daily basis 12-hour average oxygen concentrations for the two consecutive periods of each operating day for the recovery furnace and lime kiln. These 12-hour averages shall correspond to the 12-hour average TRS concentrations under 40 CFR s. 60.284(c)(1) and shall be determined as an arithmetic mean of the appropriate 12 contiguous 1-hour average oxygen concentrations provided by each continuous monitoring system installed under paragraph 40 CFR s. 60.284(a)(2). (c) Using the following equation, correct all 12-hour average TRS concentrations to 10 volume percent oxygen: $C_{corr} = C_{meas} \times \frac{21-X}{21-Y}$ where: C_{corr} is the concentration corrected for oxygen C_{meas} is the concentration uncorrected for oxygen X is the volumetric oxygen concentration in percentage to be corrected to (10% for lime kilns) Y is the measured 12-hour average volumetric oxygen concentration. (d) Record once per shift measurements obtained from the continuous monitoring devices installed under 40 CFR s. 60.284(b)(2). These monitoring devices are required in Condition

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	F.7.c.(1). [40 CFR s. 60.284(c); s. 285.65(13), Wis. Stats.; s. NR 440.45(5)(c), Wis. Adm. Code; est. in 445031180-P20] (3) The permittee shall report semiannually periods of excess emissions as follows: for emissions from any lime kiln, periods of excess emissions are all 12-hour average TRS concentrations above 8 ppm by volume. [40 CFR s. 60.284(d)(2); s. 285.65(13), Wis. Stats.; s. NR 440.45(5)(d)2., Wis. Adm. Code; est. in 445031180-P20]

7. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, 40 CFR Part 63, Subpart MM: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources at Kraft Pulp Mills

a. Limitation:

(1)(a)Whenever residual oil is burned in the lime kiln, and natural gas is burned in an amount less than or equal to a pilot flame, the permittee must ensure that the concentration of particulate matter (PM) in the exhaust gases discharged to the atmosphere from the lime kiln is less than or equal to 0.13 grains of PM per dry standard cubic foot (gr/dscf) corrected to 10 percent oxygen, unless provided otherwise under Condition ZZZ.8.a.
(b) Whenever residual oil is burned in the lime kiln, and natural gas is burned in an amount greater than a pilot flame, the permittee must ensure that the concentration of particulate matter (PM) in the exhaust gases discharged to the atmosphere from the lime kiln is less than or equal to 0.066 grains of PM per dry standard cubic foot (gr/dscf) corrected to 10 percent oxygen, unless provided otherwise under Condition ZZZ.8.a.
[40 CFR §63.862(a)(1)(ii); s. 285.65(13), Wis. Stats.; est. in 445031180-P10]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall operate wet scrubber C13 with 7 Ahlstrom nozzles and 4 Turbotak high-pressure air atomizing fine droplet nozzles, unless an alternate number or type of nozzle is approved under condition ZZZ.8.a. [40 CFR §63.864(j) and s. 285.65(13), Wis. Stats.] ; est. in 445031180-P10] (2) The permittee shall maintain the following minimum 3-hour average parameters for scrubbing liquid used by the Ahlstrom nozzles, unless the exceedance is excused or an alternate range is approved under condition ZZZ.8: (a) Liquid pressure of 249 pounds per square inch, (b) Liquid flow rate of no less than 264 gallons per minute. [40 CFR §63.864(j) and s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (3) The permittee shall maintain the following minimum 3-hour average parameters for the Turbotak nozzles, unless the exceedance is excused or an alternate range is approved under condition ZZZ.8: (a) Air pressure of 90 pounds per square inch,	(1) On each stack that exhausts the lime kiln and is equipped with a wet scrubber, the permittee must install, calibrate, maintain, and operate a continuous parameter monitoring system to determine and record the liquid pressure to the Ahlstrom nozzles in the scrubber, the air pressure to the Turbotak nozzles, and the scrubbing liquid flow rate to both types of nozzles, using the procedures in 40 CFR §63.8(c), and the following procedures: (a) The monitoring device used for the continuous measurement of the liquid pressure of the scrubber fluid to the Ahlstrom nozzles must be certified by the manufacturer to be accurate to within a gage pressure of $\pm$ 5 percent of the meter design pressure; (b) The monitoring device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within $\pm$ 5 percent of the design scrubbing liquid flow rate. (c) The monitoring device used for continuous measurement of air pressure to the Turbotak nozzles must be certified by the manufacturer to be accurate within $\pm$ 5 percent of the design air pressure. [40 CFR §63.864(e) and s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (2) See additional requirements under Table ZZZ.8. [s. 285.65(13), Wis. Stats.; est. in 445031180-P10]

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(b) Liquid flow rate of no less than 40 gallons per minute. [40 CFR §63.864(j) and s. 285.65(13), Wis. Stats.; est. in 445031180-P10]	

G. Stack S19 P19 C20
Slaker and causticizing tanks. The emissions from the slaker and two causticizing tanks are controlled by a common water scrubber. Last modified in 1986.

1. Pollutant: Particulate Matter and PM_{10} Emissions

a. Limitation:

(1) Particulate matter emissions may not exceed the most restrictive of the following:
(a) 0.34 pound per hour.
(b) 0.40 pounds per 1000 pounds of exhaust gas.
(c) The emission limit given by the equation $E=3.59P^{0.62}$, where E is the allowable emissions from Process P19 in pounds per hour and P is the process weight rate in tons per hour. If the calculated emission rate for Process P19 is less restrictive than the applicable concentration specified in Condition G.1.a.(1)(a) based on the maximum exhaust flow rate and normal exhaust gas temperature, the limitation in Condition G.1.a.(1)(a) shall apply.
[s. 285.65(3), Wis. Stats.; ss. NR 415.05(1)(o) and (2), Wis. Adm. Code; est. in 445031180-P20]

(2) PM_{10} emissions may not exceed 0.34 pound per hour. [s NR 404.08(2), Wis. Adm. Code; s. 285.65(3), Wis. Stats.; est. in 445031180-P20]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall operate the scrubber at all times the process is in operation except during times of routine purging or emergency. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P01] (2) The permittee shall inspect the scrubber once per shift while the process is in operation to verify there is water flow to the scrubber. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P01] (3) The permittee shall perform periodic inspections of the scrubber to ensure that the control equipment is operating properly. The time interval between inspections may not exceed eighteen (18) months. The periodic inspections shall include, but not be limited to inspections and repair or maintenance as necessary, of: (a) spray nozzle for signs of corrosion and build up; (b) Inlet and outlet ducts for clogging and for holes or other leakage. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P01]	(1) Whenever compliance emission testing is required for Particulate Matter Emissions, the permittee shall use US EPA Method 5, including condensible back half emissions using US EPA Method 202, or alternate methods approved in writing by the Department. [s. NR 439.06(1), Wis. Adm. Code; est. in 445031180-P20] (2) Whenever PM_{10} emissions testing is required, the permittee shall use one of the following: (a) Emissions testing results generated per Condition G.1.c.(1) above. If this option is chosen, all emissions measured by US EPA Methods 5 and 202 are assumed to be PM_{10}. (b) US EPA Method 201A, and US EPA Method 202 for condensible particulate matter. (c) Alternate methods approved in advance by the Department. [ss. NR 439.06(1) and (1m), Wis. Adm. Code; est. in 445031180-P20] (3) The permittee shall keep records of the results of the inspections required by Condition G.1.b.(2), and of any maintenance or repairs performed as a result of these inspections. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20] (4) The permittee shall keep records of: (a) The date and initials of the person performing the inspections of the scrubber required by Condition G.1.b.(3); (b) A list of the items inspected; and (c) Any maintenance or repairs performed as a result of these inspections. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

G. Stack S19 P19 C20
Slaker and causticizing tanks. The emissions from the slaker and two causticizing tanks are controlled by a common water scrubber. Last modified in 1986.

2. Pollutant: Visible Emissions

a. Limitation: 20% Opacity [s. NR 431.05, Wis. Adm. Code; est. in 445031180-P01]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) See Conditions G.1.b.(1) and (2) for Particulate Matter Emissions. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code; est. in 445031180-P01] (2) See Conditions G.1.c.(2) and (3) for particulate matter emissions. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

3. Pollutant: *Formaldehyde

(1) *Control emissions with Best Available Control Technology (BACT). BACT shall consist of Current Operating Practices, defined as the following:
(a) * The permittee shall use fresh water on the slaker scrubber or use technology which has been demonstrated to be equivalent at reducing emissions from this source.
[s. NR *445.07(1)(c), Wis. Adm. Code; est. in 445031180-P10]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) *The permittee shall use fresh water on the slaker scrubber or use technology which has been demonstrated to be equivalent at reducing emissions from this source. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P01]	(1) *The permittee shall make available to the Department upon request plans and specifications detailing the piping network for the fresh water pipes throughout the pulping operation system. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P01] (2) *Whenever formaldehyde emissions testing is required, the permittee shall use methods and plans approved, in writing, by the Department. [s. NR 439.06(8), Wis. Adm. Code; est. in 445031180-P20]

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Digester system, multiple-effect evaporator, and turpentine noncondensible gas (NCG) collection system. Emissions from this system are routed to the Lime Kiln (P12) with Power Boiler 11 (B11) as a backup. Multiple-effect evaporator was last modified pre-1972. Digester system last modified in 1986. NCG system last modified in 1991.

1. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, 40 CFR Part 63, Subpart S: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Pulp & Paper Production at Kraft Pulp Mills (gaseous organic HAPs, as methanol)

a. Limitations:

(1) The permittee shall control the total HAP emissions from each Low Volume, High Concentration (LVHC) noncondensible gas (NCG) system, as follows:
(a) Enclose the source, vent the LVHC NCG into a closed-vent system and convey the NCG collected to a control device that meets the requirements of 40 CFR s. 63.443(d). [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.443(c); s. NR 464.03(3), Wis. Adm. Code; est. in 445031180-P20]
(b) LVHC NCG shall be introduced into the primary fuel or into the flame zone of the lime kiln, process P12; or introduced into boiler B11with the combustion air. [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.443(d)(4); s. NR 464.03(4)(c), Wis. Adm. Code; est. in 445031180-P10]

(2) The permittee shall control the total HAP emissions in pulping process condensates (any HAP-containing liquid) from affected sources listed in s. NR 464.06(2), as follows:
(a) Collect no less than 11.0 pounds of HAP per ton of oven dry pulp (ODP) on a 15-day rolling average.
[s. 285.65(13), Wis. Stats.; 40 CFR s. 63.447; s. NR 464.07, Wis. Adm. Code; est. in 445031180-P10][19]
(b) All condensate shall be collected and conveyed in a closed collection system.
[s. 285.65(13), Wis. Stats.; 63.446(d); s. NR 464.06(4), Wis. Adm. Code; est. in 445031180-P10]
(c) On a daily basis the UNOX biological treatment tank shall be operated to:
1. Destroy at least 92 percent by weight of total HAPs from pulping process condensates, or
2. Remove at least 10.1 pounds of total HAP per ton of ODP.
[s. 285.65(13), Wis. Stats.; 40 CFR ss. 63.446(e) and 63.447; ss. NR 464.06(5) and NR 464.07, Wis. Adm. Code; est. in 445031180-P10]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) Each enclosure shall maintain negative pressure at each enclosure or hood opening in the closed-vent system, as demonstrated by the procedures specified in 40 CFR s. 63.457(e). Each enclosure or hood opening closed during the initial performance test shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs. [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.450(b); s. NR 464.08(2), Wis. Adm. Code; 99-SDD-109-R1] (2) Each component of the closed-vent system that is operated at positive pressure and located prior to a control device shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million by volume	(1) The total HAP content in pulping process condensate shall be measured as methanol, using EPA Method 305 or N.C.A.S.I. Method DI/MEOH-94.03. [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.453(m); s. NR 464.09(13), Wis. Adm. Code; EPA Approval Letter dated 9/27/02; est. in 445031180-P10] (2) Each enclosure and closed-vent system used to comply with condition H.1.a.(1)(a), shall comply with the following: (a) For each enclosure opening, a visual inspection of the closure mechanism specified in s. NR 464.08(2) shall be performed at least monthly to ensure the opening is maintained in the closed position and sealed. (b) Each closed-vent system required by s. NR 464.08(1) shall be visually inspected every month and at other times as requested by the department. The visual inspection shall include inspection of ductwork, piping, enclosures and connections to covers for visible evidence of defects. (c) For positive pressure closed-vent systems or portions of closed-vent systems, demonstrate no detectable leaks as specified in s. NR 464.08(3), measured initially and annually by the procedures in 40

[19] Collection requirement increased to comply with ch. NR 464 Clean Condensate Alternative.

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Digester system, multiple-effect evaporator, and turpentine noncondensible gas (NCG) collection system. Emissions from this system are routed to the Lime Kiln (P12) with Power Boiler 11 (B11) as a backup. Multiple-effect evaporator was last modified pre-1972. Digester system last modified in 1986. NCG system last modified in 1991.

1. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, 40 CFR Part 63, Subpart S: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Pulp & Paper Production at Kraft Pulp Mills (gaseous organic HAPs, as methanol)

above background, as measured by the procedures specified in 40 CFR s. 63.457(d). [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.450(c); s. NR 464.08(3), Wis. Adm. Code; est. in 445031180-P20] (3) Each bypass line in the closed-vent system that could divert vent streams containing HAP to the atmosphere, shall comply with either of the following: (a) On each bypass line the permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications a flow indicator that provides a record of the presence of gas stream flow in the bypass line at least once every 15 minutes. The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line; or (b) For bypass line valves that are not computer controlled, the permittee shall maintain the bypass line valve in the closed position with a car seal or a seal placed on the valve or closure mechanism in such a way that the valve or closure mechanism cannot be opened without breaking the seal. [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.450(d); s. NR 464.08(4), Wis. Adm. Code, Permit 99-SDD-109-R1] (4) Each closed collection system for pulping process condensate shall meet the individual drain requirements specified in 40 CFR ss. 63.960, 63.961 and 63.962 of 40 CFR Part 63, Subpart RR. [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.446(d)(1); s. NR 464.06(4)(a), Wis. Adm. Code; est. in 445031180-P10] (5) Each condensate tank in the closed collection system shall meet both of the following requirements: (a) Each tank shall be equipped with a fixed roof, and all openings such as access hatches, sampling ports and gauge wells, shall be designed and operated with no	CFR s. 63.457(d). (d) Demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in 40 CFR s. 63.457(e). (e) The valve or closure mechanism specified in s. NR 464.08(4)(b) shall be inspected at least monthly to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line. (f) If an inspection required by paragraphs (a) to (e) identifies visible defects in ductwork, piping, enclosures or connections to covers required by s. NR 464.08, or if an instrument reading of 500 parts per million by volume or greater above background is measured, or if enclosure openings are not maintained at negative pressure, then the following corrective actions shall be taken as soon as practicable: 1. A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified. 2. The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified. Delay of repair or corrective action is allowed if the repair or corrective action is technically infeasible without a process unit shutdown or if the permittee determines that the emissions resulting from immediate repair would be greater than the emission likely to result from delay of repair. Repair of the equipment shall be completed by the end of the next process shutdown. [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.453(k); s. NR 464.09(11), Wis. Adm. Code; Permit 99-SDD-109-R1; EPA Approval Letter dated 10/26/01] (3) Each pulping process condensate closed collection system used to comply with condition H.1.a.(2)(c) shall comply as follows: (a) Each closed collection system shall be visually inspected monthly and shall comply with the inspection and monitoring requirements specified in 40 CFR s. 63.964 of Part 63, Subpart RR, except: 1. Owners or operators shall comply with the recordkeeping requirements of s. NR 464.10 instead of the requirements of 40 CFR ss. 63.964(a)(1)(vi) and (b)(3). 2. Owners or operators shall comply with inspection and monitoring requirements specified in Conditions H.1.b.(8) and H.1.c.(2) instead of 40 CFR s. 63.964(a)(2) of subpart RR. (b) Each condensate tank used in the closed collection system shall be operated with no detectable leaks as specified in s. NR 464.06(4)(b)1., measured initially and annually by the procedures specified in 40 CFR s. 63.457(d). (c) If an inspection required by this section identifies visible defects

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detectable leaks as indicated by an instrument reading of less than 500 parts per million above background, and vented into a closed-vent system. (b) Each opening shall be maintained in a closed, sealed position, e.g., covered by a lid that is gasketed and latched, at all times that the tank contains pulping process condensates or any HAP removed from a pulping process condensate stream except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance or repair. [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.446(d)(2); s. NR 464.06(4)(b), Wis. Adm. Code; est. in 445031180-P10] (6) The permittee shall install, calibrate, certify, operate and maintain a continuous monitoring system (CMS) for each of the following daily parameters: (a) The number of softwood and hardwood cooks, (b) Total condensate flow, (c) The methanol content of condensate collected, (d) The pounds of total HAP (as methanol) collected per ton of ODP on a daily basis and 15-day rolling average. [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.453(i); s. NR 464.09(9), Wis. Adm. Code; est. in 445031180-P20] (7) On an annual basis the permittee shall calculate the long-term methanol concentration of the foul condensate stream by adding data from the previous 12 months to past data. In the following year, on days the Optiquest model predicts treatment compliance, the re-calculated average condensate methanol concentration shall be used to provide data for condition H.1.b.(6)(c). On days the Optiquest model predicts excess emissions, sampling shall be conducted per condition H.1.b.(9)(b). [s. 285.65(13), Wis. Stats.; 40 CFR s.	in the closed collection system, or if an instrument reading of 500 ppm or greater above background is measured, then corrective actions specified in 40 CFR s. 63.964(b) of subpart RR shall be taken. [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.453(l); s. NR 464.09(12), Wis. Adm. Code; Permit 99-SDD-109-R1; EPA Approval Letter dated 10/26/01] (4) For each applicable enclosure opening, closed-vent system and closed collection system, the permittee shall prepare and maintain a site-specific inspection plan, including a drawing or schematic of the components of applicable affected equipment, and shall record all of the following information for each inspection: (a) Date of inspection. (b) The equipment type and identification. (c) Results of negative pressure tests for enclosures. (d) Results of leak detection tests. (e) The nature of the defect or leak and the method of detection, that is, visual inspection or instrument detection. (f) The date the defect or leak was detected and the date of each attempt to repair the defect or leak. (g) Repair methods applied in each attempt to repair the defect or leak. (h) The reason for the delay if the defect or leak is not repaired within 15 days after discovery. (i) The expected date of successful repair of the defect or leak if the repair is not completed within 15 days. (j) The date of successful repair of the defect or leak. (k) The position and duration of opening of bypass line valves and the condition of any valve seals. (l) The duration of the use of bypass valves on computer controlled valves. [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.454(b); s. NR 464.10(2), Wis. Adm. Code; 99-SDD-109-R1] (5) When the permittee determines that a portion of the LVHC system equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger, or the equipment is inaccessible because inspecting personnel would be elevated more than 2 meters above a support surface and the equipment cannot be inspected from the floor, that equipment is exempt from the monthly and annual inspections and monitoring requirements. (a) For each portion of the LVHC system equipment that the permittee designates as unsafe, the permittee shall prepare and make available to the department a written plan that identifies all

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Digester system, multiple-effect evaporator, and turpentine noncondensible gas (NCG) collection system. Emissions from this system are routed to the Lime Kiln (P12) with Power Boiler 11 (B11) as a backup. Multiple-effect evaporator was last modified pre-1972. Digester system last modified in 1986. NCG system last modified in 1991.

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63.453(m); s. NR 464.09(13), Wis. Adm. Code; EPA Approval Letter dated 9/27/02; est. in 445031180-P10]

(8) The permittee shall install, calibrate, certify, operate and maintain a CMS for the UNOX biological treatment tank that includes the following.
(a) Collect grab samples each shift (3 times per day) from the following sample locations:
1. Central Foul Condensate Collection Tank Pump Discharge to UNOX,
2. Aerated Lagoon Outlet to the UNOX,
3. UNOX outlet to the secondary clarifiers,
Preserve the samples collected from Locations 2 and 3 to a pH 2-3 with HCl. Retain all of the samples at <4º C in a laboratory refrigerator pending the daily results of the Optiquest model.
(b) On a daily basis, monitor and record the following:
1. Effluent temperature entering UNOX.
2. Dissolved oxygen in UNOX Stage 1.
3. Dissolved oxygen in UNOX Stage 2.
4. Dissolved oxygen in UNOX Stage 3.
5. Mixed liquor volatile suspended solids in UNOX Stage 3.
6. Return sludge suspended solids from No.1 2° clarifier.
7. Effluent pH at outlet to secondary (2°) clarifiers.
8. Effluent temperature leaving UNOX.
9. Primary clarifier flow to UNOX.
10. Return sludge flow from No.1 2° clarifier to UNOX.
11. Return sludge flow from No.2 2° clarifier to UNOX.
12. Waste sludge flow to sludge pit.
13. Oxygen purity in UNOX vent gas.
14. Percent UNOX Stage 3 vent valve setting.
15. UNOX influent ammonia concentration.
16. UNOX outlet ammonia concentration.
17. Oxygen uptake rate in UNOX Stage 1.
18. Oxygen uptake rate in UNOX Stage 2.
19. Oxygen uptake rate in UNOX Stage 3.
20. Secondary clarifier dissolved oxygen

parts of the system that are designated unsafe, explains why the equipment is unsafe to inspect, and provides a schedule to inspect each unsafe piece of equipment, which is as frequent as practicable during safe-to-inspect times.
(b) For each portion of the LVHC system equipment that the permittee designates as inaccessible, the permittee shall prepare and make available to the department a written inspection plan that identifies all parts of the system that are designated as inaccessible, explains why the equipment is inaccessible, and provides a schedule to inspect each inaccessible piece of equipment, which is at least once every 3 years.
[s. 285.65(13), Wis. Stats.; 40 CFR s. 63.453(m); s. NR 464.09(13), Wis. Adm. Code; EPA Approval Letter dated 10/26/2001; est. in 445031180-P10]

(10) Whenever compliance emission testing is required for total HAP emissions, the permittee shall follow the methods outlined in 40 CFR s. 63.457. [s. NR 439.06(8), Wis. Adm. Code; Permit 99-SDD-109-R1]

(11)(a) As outlined in Table 1 to 40 CFR Part 63, Subpart S, the permittee shall comply with the applicable recordkeeping requirements of 40 CFR ss. 63.10(b)(1), 63.10(b)(2)(iii), 63.10 (b)(2)(vi)-(xiv), 63.10(c)(1), 63.10(c)(5)-(8), and 63.10(c)(12)-(14).
(b) The permittee shall record the CMS parameters specified in 40 CFR s. 63.453 and meet the requirements specified in Condition H.1.c.(11)(a) for any new affected process equipment or pulping process condensate stream that becomes subject to the standards of 40 CFR Part 63, Subpart S due to a process change or modification.
(c) The permittee shall set the flow indicator on each bypass line specified in 40 CFR s. 63.450(d)(1) to provide a record of the presence of gas stream flow in the bypass line at least once every 15 minutes.
(d) Recordkeeping of malfunctions. The permittee must maintain the following records of malfunctions:
(i) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
(ii) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR s. 63.453(q), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
[s. 285.65(13), Wis. Stats.; 40 CFR s. 63.454; Table 1 to 40 CFR Part 63, Subpart S; s. NR 464.10, Wis. Adm. Code; est. in 445031180-P20]

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concentration.
21. Average condensate methanol concentration.
22. Condensate daily flow rate to UNOX.
23. Aerated lagoon flow rate.

[s. 285.65(13), Wis. Stats.; 40 CFR s. 63.453(m); s. NR 464.09(13), Wis. Adm. Code; EPA Approval Letter dated 9/27/02; est. in 445031180-P10]

(9) On a daily basis, the permittee shall demonstrate compliance with at least one of the condensate treatment standards of condition H.1.a.(2)(c) using the following procedures.

(a) The methanol percent reduction shall be calculated using the following equations:

$$R = \frac{f_{bio}(MeOH)}{(1+1.087(r))} * 100$$

$$r = \frac{F_{(nonmethanol)}}{F_{(methanol)}}$$

The methanol mass removal shall be calculated using the following equation:

$$F = F_{methanol} \times \frac{f_{bio}(MeOH)}{(1+1.087(r))} * 100$$

Where:

"R" = percent destruction of total HAP.

"$F_{bio}(MeOH)$" = the fraction of methanol removed in the biological treatment system. The site-specific biorate constants shall be determined using the appropriate procedures specified in Appendix C of 40 CFR part 63.

"r" = ratio of the sum of acetaldehyde, methyl ethyl ketone, and proprionaldehyde mass to methanol mass.

"$F_{(nonmethanol)}$" = the sum of acetaldehyde, methyl ethyl ketone, and proprionaldehyde mass flow rates entering the biological treatment system.

(12)(a) As outlined in Table 1 to 40 CFR Part 63, Subpart S, the permittee shall comply with the applicable reporting requirements of 40 CFR ss. 63.10(d)(2), 63.10(d)(4), 63.10(e)(1), 63.10(e)(2)(i), and 63.10(e)(3).

(b) The permittee shall meet the requirements specified in Condition H.1.c.(12)(a) upon startup of any new affected process equipment or pulping process condensate stream that becomes subject to the standards of 40 CFR Part 63, Subpart S due to a process change or modification.

(c) *Malfunction reporting requirements*. If a malfunction occurred during the reporting period, the report must include the number, duration and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by the permittee during a malfunction of an affected source to minimize emissions in accordance with 40 CFR s. 63.453(q), including actions taken to correct a malfunction.

(d)(i) The permittee shall report the results of the performance test before the close of business on the 60th day following the completion of the performance test, unless approved otherwise in writing by the Department. A performance test is "completed" when field sample collection is terminated. Unless otherwise approved by the Department in writing, results of a performance test shall include the analysis of samples, determination of emissions and raw data. A complete test report must include the purpose of the test; a brief process description; a complete unit description, including a description of feed streams and control devices; sampling site description; pollutants measured; description of sampling and analysis procedures and any modifications to standard procedures; quality assurance procedures; record of operating conditions, including operating parameters for which limits are being set, during the test; record of preparation of standards; record of calibrations; raw data sheets for field sampling; raw data sheets for field and laboratory analyses; chain-of-custody documentation; explanation of laboratory data qualifiers; example calculations of all applicable stack gas parameters, emission rates, percent reduction rates, and analytical results, as applicable; and any other information required by the test method and the Department.

(ii) Within 60 days after the date of completing each performance test (defined in 40 CFR s. 63.2) as required by Subpart S, the permittee must submit the results of the performance tests, including any associated fuel analyses, required by Subpart S to the EPA's WebFIRE database by using the Compliance and Emissions

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"$F_{(methanol)}$" = the mass flow rate of methanol entering the biological treatment system.

"F" = methanol mass removal.

(b) Execute the Optiquest model on a daily basis after the data from the previous day has been obtained. The inputs into the model are the 24-hour average values of the input variables from the previous 6AM-6AM mill day. If the Optiquest model demonstrates compliance with either standard (passes), nothing further is required for that day.

If the Optiquest model indicates that sampling is required (because a standard may be exceeded), the representative retained liquid samples obtained in (8)(a) are sent to an outside contracted laboratory for analyses. The laboratory composites the three shift samples from each of the locations and analyzes the total HAP content (as methanol). The three methanol concentrations along with the corresponding flows are used to recalculate the f_{bio}(MeOH) factor for that day. New values for R and F are calculated for that day using the average r factor determined during the last condensate treatment performance test.

(c) On a monthly basis the permittee shall collect samples as indicated in (8)(a), analyze them for total HAP content, and calculate the daily f_{bio} regardless of the results of the Optiquest Model.

[s. 285.65(13), Wis. Stats.; 40 CFR s. 63.453(m); s. NR 464.09(13), Wis. Adm. Code, EPA Approval Letter dated 9/27/02; est. in 445031180-P10]

(10) The permittee shall operate each control device (lime kiln P12, boiler B11, and the UNOX reactor) in a manner consistent with the minimum or maximum, as appropriate, operating parameter value or procedure required to be monitored. Except as provided under condition H.1.b.(11), operation of a control device below minimum operating parameter values or above maximum operating parameter values

Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) (http://www.epa.gov/cdx). Performance test data must be submitted in the file format generated through use of the EPA's Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/index.html). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk, flash drive or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to the EPA via CDX as described earlier in this paragraph. At the discretion of the Department, the permittee must also submit these reports, including the CBI, to the Department in the format specified by the Department. For any performance test conducted using test methods that are not listed on the ERT Web site, the permittee must submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR s. 63.13.

(iii) Within 60 days after the date of completing each CEMS performance evaluation test as defined in 40 CFR s. 63.2, the owner or operator must submit relative accuracy test audit (RATA) data to the EPA's CDX by using CEDRI in accordance with Condition H.1.c.(12)(d)(ii). Only RATA pollutants that can be documented with the ERT (as listed on the ERT Web site) are subject to this requirement. For any performance evaluations with no corresponding RATA pollutants listed on the ERT Web site, the permittee must submit the results of the performance evaluation to the Administrator at the appropriate address listed in 40 CFR s. 63.13.

(iv) All reports required by Subpart S not subject to the requirements in Conditions H.1.c.(12)(d)(ii) and (iii) must be sent to the Administrator at the appropriate address listed in 40 CFR s. 63.13. The Administrator or the Department may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to Conditions H.1.c.(12)(d)(ii) and (iii) in paper format.

[s. 285.65(13), Wis. Stats.; 40 CFR s. 63.455; Table 1 to Subpart S; s. NR 464.11, Wis. Adm. Code; est. in 445031180-P20]

(13) To reestablish the value of any operating parameter required to

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Digester system, multiple-effect evaporator, and turpentine noncondensible gas (NCG) collection system. Emissions from this system are routed to the Lime Kiln (P12) with Power Boiler 11 (B11) as a backup. Multiple-effect evaporator was last modified pre-1972. Digester system last modified in 1986. NCG system last modified in 1991.

1. Pollutant: Hazardous Air Pollutants (HAP) regulated under section 112(b) of the Clean Air Act, 40 CFR Part 63, Subpart S: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Pulp & Paper Production at Kraft Pulp Mills (gaseous organic HAPs, as methanol)

established or failure to perform procedures required shall constitute a violation of the applicable emission standard and be reported as a period of excess emissions. [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.453(o); s. NR 464.09(15), Wis. Adm. Code; est. in 445031180-P10]	be monitored or to establish new parameters, the permittee shall follow the procedures of s. NR 464.09(14), Wis. Adm. Code. [s. 285.65(13), Wis. Stats.; 40 CFR ss. 63.453(m) and (n); ss. NR 464.09(13) and (14), Wis. Adm. Code; est. in 445031180-P10]
(11) Periods of excess emissions from the LVHC collection system or control devices (lime kiln P12 and boiler B11) that are reported under s. NR 464.11, are not a violation of condition H.1.a.(1) provided that the time of excess emissions divided by the total process operating time in a semi-annual reporting period does not exceed one percent. [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.443(e); s. NR 464.03(5), Wis. Adm. Code; est. in 445031180-P20]	(14) The permittee shall make available to the Department upon request plans and specifications detailing the piping network for the NCG system to the lime kiln P12 and power boiler B11. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P01]
(12) At all times, the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.453(q); est. in 445031180-P20]	(15) The permittee shall keep records of any maintenance or repairs performed as a result of the maintenance checks required in Condition H.1.b.(13). The permittee shall note the date and initials of the person performing the maintenance or repairs, and a description of the repairs. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]
(13) The permittee shall perform annual maintenance checks on the NCG system for signs of leakage and to ensure the system is operating properly according to facility operating procedures. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code; est. in 445031180-P20]	

H. Stack S17 P17

Digester system, multiple-effect evaporator, and turpentine noncondensible gas (NCG) collection system. Emissions from this system are routed to the Lime Kiln (P12) with Power Boiler 11 (B11) as a backup. Multiple-effect evaporator was last modified pre-1972. Digester system last modified in 1986. NCG system last modified in 1991.

2. Pollutant: Total Reduced Sulfur (TRS) and Reduced Sulfur Compounds

a. Limitation:

(1) No owner or operator may cause to be discharged into the atmosphere from any digester system or condensate stripper system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10% oxygen, unless:
(a) The gases are combusted in a lime kiln subject to the provisions in s. NR 440.45(4)(a)5., Wis. Adm. Code; or
(b) The gases are combusted with other waste gases in an incinerator or other device, and are subjected to a minimum temperature of 650 °C (1200 °F) for at least 0.5 second.
[40 CFR ss. 60.283(a)(1)(i) and (iii); s. 285.65(13), Wis. Stats.; ss. NR 440.45(4)(a)1.a. and c., Wis. Adm. Code; 86-DLJ-058 and 90-POY-020]

(2) The lime kiln which will be used to combust the TRS shall meet the following limit. No owner or operator may cause to be discharged into the atmosphere from any lime kiln any gases with contain TRS in excess of 8.0 ppm by volume on a dry basis, corrected to 10% oxygen. [40 CFR ss. 60.283(a)(5); s. 285.65(13), Wis. Stats.; s. NR 440.45(4)(a)5., Wis. Adm. Code; 86-DLJ-058]

(3) Noncondensibles from digesters and multiple-effect evaporators shall be treated to reduce the emission of TRS equal to the reduction achieved by thermal oxidation in a lime kiln. [s. NR 417.06(2), Wis. Adm. Code; 86-DLJ-058]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) NCGs from the digester and multiple-effect evaporators shall be routed to the lime kiln (P12) for incineration. [ss. NR 417.06(2) and 407.09(4)(a), Wis. Adm. Code; 86-DLJ-058 (for digesters, blow tank and turpentine condenser); est. in 445031180-P01] (2) During shutdown times of P12, NCGs shall be routed to B11 for incineration. [s. NR 417.06(2) and 407.09(4)(a), Wis. Adm. Code; 90-POY-020] (3) <u>Compliance Assurance Monitoring (CAM):</u> The digester system is a pollutant-specific emissions unit subject to the CAM requirements of 40 CFR Part 64. The CAM monitoring requirements are fulfilled by complying with conditions H.1.b.(1), (2) and (3) and H.1.c.(2) and (4). [s. 285.65(13), Wis. Stats.; 40 CFR Part 64.6(c); est. in 445031180-P20]	(1) Reference Test Method for TRS limits in Conditions H.2.a.(1) and (2): (a) US EPA Method 16 shall be used to determine the TRS concentration. The TRS concentration shall be corrected to the appropriate oxygen concentration using the procedure in 40 CFR s. 60.284(c)(3). The sampling time shall be at least 3 hours, but no longer than 6 hours. (b) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration. The sample shall be taken over the same time period as the TRS samples. (c) In place of Method 16, Method 16A or 16B may be used. [40 CFR ss. 60.285(d)(1) and (2) and 60.285(f)(2); s. 285.65(13), Wis. Stats.; ss. NR 440.45(6)(d)1. and 2. and (f)2., Wis. Adm. Code; est. in 445031180-P20] (2) The permittee shall make available to the Department upon request plans and specifications detailing the piping network for the NCG pipes to the lime kiln P12 and power boiler B11. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P01] (3) The permittee shall submit to the Department on a quarterly basis NCG venting over one minute and summaries of the total venting time in that quarter. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P01] (4) The permittee shall calibrate and maintain the LVHC NCG monitoring system according to the manufacturer's specifications. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P10]

I. Stack S20 P20
Brown stock washer system. This stack is a grouping of similar process sources. Emissions from this source are uncontrolled and vented to the atmosphere. Last modified in 1985.
Stack S21 P21
Screening and cleaning system. The pulp is cleaned of impurities in the cleaners and screeners and sent to the Decker system. Last modified in 1984. Uncontrolled.
Stack S22 P22
Decker system. From the screening system, the pulp is dewatered at the Decker or Wet-lap Machine and finally stored in the High Density Pulp Storage area. Last modified in 1984. Uncontrolled.

1. Pollutant: Volatile Organic Compound Emissions

(1)(a) Latest Available Control Techniques (LACT). LACT for P20 is the use of fresh water or equal in the last stage of this process.
(b) Fresh water is utilized in reducing VOC and TRS emissions from pulping operating. "Fresh water" is defined as the water withdrawn from the Fox River and used throughout the facility for process or cooling purposes.
[s. NR 424.03(2)(c), Wis. Adm. Code; est. in 445031180-P01]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall use fresh water to wash the brown stock in the last stage of the brown stock washer line or use technology which has been demonstrated to be equivalent at reducing VOC emissions from this source. [s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P01]	(1) Whenever compliance emission testing is required for Organic Compound Emissions, the permittee shall use US EPA Method 18, 25, 25A, or 25B, or an alternate method approved in writing by the Department. [s. NR 439.06(3)(a), Wis. Adm. Code; est. in 445031180-P20] (2) The permittee shall make available to the Department upon request plans and specifications detailing the piping network for the fresh water pipes to the brown stock washer system. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P01]

K. S11, P11 6.7 TPH No. 11 Paper Machine (Beloit Corp.) with size press, last modified 2010.
S13, P13 9.5 TPH No. 13 Paper Machine (Beloit Corp.) with size press, IR and Yankee dryer, last modified 2010.
S14, P14 6.5 TPH No. 14 Paper Machine (Beloit Corp) with size press and Yankee dryer, last modified 2010.
S15, P15 13.0 TPH No. 15 Paper Machine with size press and IR dryer, last modified 2010.
S16, P16 7.4 TPH No. 12 Paper Machine, last modified 2010.

1. Pollutant: Particulate Matter (PM) and PM_{10} Emissions

a. Limitations:

(1) Particulate matter and PM_{10} emission limitations for all stacks combined exhausting each paper machine: Best Available Control Technology (BACT):
(a) 0.08 pound per ton of paper produced.
(b)(i) 0.54 pound per hour for P11.
(ii) 0.76 pound per hour for P13.
(iii) 0.52 pound per hour for P14.
(iv) 1.04 pounds per hour for P15.
(v) 0.59 pound per hour for P16.
[ss. NR 405.08 and NR 404.08(2), Wis. Adm. Code; s. 285.65(3), Wis. Stats.; 09-POY-259]

(2) Particulate matter emissions may not exceed the more restrictive of the following:
(a) 0.40 pounds per 1000 pounds of exhaust gas.
(b) The emission limit given by the equation $E=3.59P^{0.62}$, where E is the allowable emissions from Process P11, P13, P14, P15 or P16 in pounds per hour and P is the process weight rate of P11, P13, P14, P15 or P16 in tons per hour. If the calculated emission rate for a given process is less restrictive than the applicable concentration specified in Condition K.1.a.(2)(a) based on the maximum exhaust flow rate and normal exhaust gas temperature, the limitation in Condition K.1.a.(2)(a) shall apply.
[ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) The permittee may burn only natural gas in the dryers associated with these paper machines. [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P10]	(1) Whenever particulate matter emission testing is required, the permittee shall use US EPA Method 5, 5A, 5B, 5D, 5E, 5F, 5G, 5H, or 17 including back half (Method 202), or other methods as approved by the Department in writing. [ss. NR 407.09(1)(c)1.a. and 439.06(1), Wis. Adm. Code; 09-POY-259] (2) Whenever PM_{10} emission testing is required, the permittee shall use one of the following: (a) Emissions testing results generated per Condition K.1.c.(1) above. If this option is chosen, all emissions measured by US EPA Methods 5 and 202 are assumed to be PM_{10}. (b) US EPA Method 201A, and US EPA Method 202 for condensible particulate matter. (c) Alternate methods as approved in advance by the Department. [ss. NR 439.06(1) and (1m), Wis. Adm. Code; est. in 445031180-P20] (3)(a) The permittee shall keep monthly records of the type of fuel burned in the paper machine dryers. (b) The permittee shall keep records for each paper machine of the average hourly paper production rate (monthly paper production/monthly operating hours. [s. NR 439.04(1)(d), Wis. Adm. Code; 09-POY-259]

2. Pollutant: Visible Emissions

K. S11, P11 6.7 TPH No. 11 Paper Machine (Beloit Corp.) with size press, last modified 2010.
S13, P13 9.5 TPH No. 13 Paper Machine (Beloit Corp.) with size press, IR and Yankee dryer, last modified 2010.
S14, P14 6.5 TPH No. 14 Paper Machine (Beloit Corp) with size press and Yankee dryer, last modified 2010.
S15, P15 13.0 TPH No. 15 Paper Machine with size press and IR dryer, last modified 2010.
S16, P16 7.4 TPH No. 12 Paper Machine, last modified 2010.

a. Limitation:

(1) 20% Opacity. [ss. NR 431.05 and NR 431.04(2), Wis. Adm. Code; est. in 445031180-P10]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) See Particulate Matter Emission Compliance Demonstration section listed for this source. [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P10]	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9, or other methods as approved by the Department in writing. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 09-POY-259] (2) See recordkeeping and monitoring requirements for particulate matter emissions. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P10]

3. Pollutant: Volatile Organic Compounds

a. Limitations:

(1) LACT – 2.2 pounds of VOC applied per ton of paper produced, averaged over any 12 consecutive months. This limit is an average of all paper making additives, coatings and on-line cleaning materials applied to paper machines Nos. 11, 12, 13, 14 and 15, collectively. VOC from pulp and off line cleaners is not included in this limit. [s. NR 424.03(2)(c)., Wis. Adm. Code; 09-POY-259]

(2) LACT - 2.9 pounds per gallon coating excluding water for the coating station. [s. NR 424.03(2)(c), Wis. Adm. Code; est. in 445031180-P01]

(3) Monthly VOC emissions from a size press shall not exceed the following:
(a) 5050 pounds per month on P11. [s. 285.65(7), Wis. Stats.; 93-CTS-413]
(b) 1666 pounds per month on P13. [s. NR 406.04(1)(g), Wis. Adm. Code; est. in 445031180-P10]
(c) 1666 pounds per month on P15. [s. NR 406.04(1)(g), Wis. Adm. Code; est. in 445031180-P10]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) The permittee shall demonstrate compliance with record keeping as required under conditions in I.K.3.c. [s. NR 439.04(1)(d), Wis. Adm. Code; 09-POY-259] (2) The permittee shall calculate, on a monthly basis, the VOC emissions from paper machine 11, 12, 13, 14 and 15, collectively, based on records kept as required under conditions in I.K.3.c. [s. NR 439.03, Wis. Adm. Code; 09-POY-259] (3) The permittee shall monitor the VOC emissions as a result of the project covered under the construction permit 09-POY-259, including VOC emissions from all emissions units in the facility that may be debottlenecked as a result of this project, and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 10 years following resumption of regular operations after the change. [s. NR 405.16(3)(d), Wis. Adm. Code; 09-	(1) Whenever compliance emission testing is required for Organic Compound Emissions, the permittee shall use US EPA Method 18, 25, 25A, or 25B, or other methods as approved by the Department in writing. [s. NR 439.06(3)(a), Wis. Adm. Code; 09-POY-259] (2)(a) The permittee shall keep documents that show the VOC content of each raw material used by each paper machine. [s. NR 439.04(1)(d), Wis. Adm. Code; 09-POY-259] (b) These documents shall consist of Safety Data Sheets, certified product data sheets, or other documents approved by the Department. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20] (3) For each paper machine, the permittee shall keep records of: (a) a unique name and identification of each raw material, as applied; (b) VOC content of each raw material, as applied, in units of weight percent and for coatings in pounds of VOC per gallon excluding water, as applied; (c) Amount of VOC containing raw material used per month, as applied, in units of pounds and for coatings in gallons, excluding water, as applied; (d) total VOC usage in units of pounds per month. [ss. NR 439.04(5)(a), Wis. Adm. Code and NR 439.04(3), Wis. Adm. Code; 09-POY-259] (4) The permittee shall keep monthly records of the pulp additive usage, in gallons or pounds as appropriate and VOC content, as a weight percent or weight per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-

K. S11, P11 6.7 TPH No. 11 Paper Machine (Beloit Corp.) with size press, last modified 2010.
S13, P13 9.5 TPH No. 13 Paper Machine (Beloit Corp.) with size press, IR and Yankee dryer, last modified 2010.
S14, P14 6.5 TPH No. 14 Paper Machine (Beloit Corp) with size press and Yankee dryer, last modified 2010.
S15, P15 13.0 TPH No. 15 Paper Machine with size press and IR dryer, last modified 2010.
S16, P16 7.4 TPH No. 12 Paper Machine, last modified 2010.

POY-259] (4) The permittee shall submit a report to the department if the annual VOC emissions, in tons per year, from the project covered under the construction permit 09-POY-259, exceed the baseline actual emissions by 40 tons per year or more, and if the emissions differ from the preconstruction projection that was provided to the department. The report shall be submitted to the department within 60 days after the end of the year. The report shall contain all of the following: 1. The name, address and telephone number of the major stationary source. 2. The annual VOC emissions as calculated. 3. Any other information that the owner or operator wishes to include in the report, e.g., an explanation as to why the emissions differ from the preconstruction projection. [s. NR 405.16(3)(f), Wis. Adm. Code; 09-POY-259]	P10] (5) The permittee shall keep monthly records of the amounts of paper produced in each paper machine in tons. [s. NR 439.04(1)(d), Wis. Adm. Code; 09-POY-259] (6) The permittee shall make the information required to be documented and maintained pursuant to I.K.3.b.(2), (3) and (4) available for inspection, upon request by the department or the general public. [s. NR 405.16(4), Wis. Adm. Code; 09-POY-259] (7) For paper machines 11, 12, 13, 14, and 15 collectively, the permittee shall keep records of: (a) VOC content of each raw material, as applied, in units of weight percent (b) Amount of VOC containing raw material used per month, as applied, in units of pounds (c) total VOC usage in unit of pounds per month. [s. NR 439.04(1)(d), Wis. Adm. Code; 09-POY-259]

4. Pollutant: ***F**ormaldehyde

a. Limitation:
(1) * Control emissions of formaldehyde with Best Available Control Technology (BACT).
(a) BACT for formaldehyde is to be determined to be the use of formaldehyde free papermaking (i.e. materials containing no more than 1,000 ppm formaldehyde) additives, coatings and cleaning materials (this does not refer to the pulp used for papermaking). [s. NR 445.07(1)(c), Wis. Adm. Code; 09-POY-259]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) *No materials used in these processes may contain ≥1000 ppm formaldehyde, not including pulp used for papermaking. [s. NR 445.07(1)(c), Wis. Adm. Code; 09-POY-259]	(1) *Reference Test Method for Formaldehyde Emissions: Whenever emission testing is required, the permittee shall use U.S. EPA Method 0011. Other methods may be used as approved by the Department in writing. [ss. NR 407.09(1)(c)1.a. and NR 439.06(8), Wis. Adm. Code; 09-POY-259] (2) *The permittee shall maintain copies of the approved MSDS for all materials used in these processes, including formaldehyde content of any such material. [s. NR 439.04 and s. NR 445.08(5)(a), Wis. Adm. Code; 09-POY-259]

5. Pollutant: ***A**cetaldehyde

a. Limitation:
(1) * Control emissions of acetaldehyde with Best Available Control Technology (BACT).
(a) BACT for acetaldehyde is to be determined to be the use of acetaldehyde free papermaking (i.e. materials containing no more than 1,000 ppm acetaldehyde) additives, coatings and cleaning materials (this does not refer to the pulp used for papermaking). [s. NR 445.07(1)(c), Wis. Adm. Code; 09-POY-259]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) *No materials used in these processes may contain ≥1000 ppm acetaldehyde, not including pulp used for papermaking. [s. NR 445.07(1)(c), Wis. Adm. Code; 09-POY-259]	(1) *Reference Test Method for Acetaldehyde Emissions: Whenever emission testing is required, the permittee shall use U.S. EPA Method 0011. Other methods may be used as approved by the Department in writing. [ss. NR 407.09(1)(c)1.a. and NR 439.06(8), Wis. Adm. Code;

K. S11, P11 6.7 TPH No. 11 Paper Machine (Beloit Corp.) with size press, last modified 2010. **S13, P13** 9.5 TPH No. 13 Paper Machine (Beloit Corp.) with size press, IR and Yankee dryer, last modified 2010. **S14, P14** 6.5 TPH No. 14 Paper Machine (Beloit Corp) with size press and Yankee dryer, last modified 2010. **S15, P15** 13.0 TPH No. 15 Paper Machine with size press and IR dryer, last modified 2010. **S16, P16** 7.4 TPH No. 12 Paper Machine, last modified 2010.	
	09-POY-259] (2) *The permittee shall maintain copies of the approved MSDS for all materials used in these processes, including acetaldehyde content of any such material. [s. NR 439.04 and s. NR 445.08(5)(a), Wis. Adm. Code; 09-POY-259]

L. S45 P45 Log storage, chipping, chip storage, conveying, and screening system. **S49 P49** Vehicle traffic on various paved & unpaved roads throughout facility. **S50, P50** Red Hills Industrial Landfill with passive gas collection, phase V starts in 1990.	
1. Pollutant: Particulate Matter Emissions	
a. Limitation: (1) The permittee may not cause, allow, or permit any materials to be handled, transported, or stored without taking precautions to prevent particulate matter from becoming airborne. [s. NR 415.04, Wis. Adm. Code; est. in 445031180-P01]	
b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) No person may cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. Nor may a person allow a structure, a parking lot, or a road to be used, constructed, altered, repaired, sand blasted or demolished without taking such precautions as outlined in NR 415.04(1), Wis. Adm. Code. [s. NR 415.04, Wis. Adm. Code; est. in 445031180-P10] (2) The permittee shall apply asphalt, water, suitable chemicals, or other Department approved methods on dirt roads, material stockpiles, and other surfaces which can create airborne dust, provided such application does not create a hydrocarbon, odor, or water pollution problem. [s. NR 415.04(1)(b), Wis. Adm. Code; est. in 445031180-P10]	(1) The permittee shall keep a log, indicating the type of precaution used and the area being treated. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P01]
2. Pollutant: Visible Emissions	
a. Limitation: 20% opacity. [s. NR 431.04(2), Wis. Adm. Code; est. in 445031180-P01]	
b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) See Conditions L.1.b.(1) and (2) for particulate matter emissions. [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever compliance emission testing is required for Visible Emissions, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code; est. in 445031180-P01] (2) See Condition L.1.c.(1) for particulate matter emissions. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

M. Emergency Generators constructed before June 12, 2006: G1, G2, G3, G4, G4A, G6, G7, G8, G9, G10, G11, G13, G14, G17, G18

1. Pollutant: Particulate Matter Emissions

a. Limitation:

(1) Limitation for Generator G3, a 107 HP Kohler/John Deere generator installed in 1971: No person may cause, allow or permit the emissions of particulate matter to the ambient air from stationary or semistationary gasoline or diesel powered internal combustion reciprocating engines in excess of 0.50 pound of particulate per million Btu heat input. [s. NR 485.055, Wis. Adm. Code; est. in 445031180-P20]

(2) Limitation for Generators G11 and G14: 0.15 pounds of particulate matter per million Btu heat input. [s. NR 415.06(2)(a), Wis. Adm. Code; est. in 445031180-P20]

(3) Generators G1, G2, G4, G4A, G6, G7, G8, G9, G10, G13, G17, and G18 are not subject to a particulate matter emission limit because each generator has a maximum heat input of less than one million Btu per hour, and none of these generators burn gasoline or diesel fuel. [ss. NR 415.06 and NR 485.055, Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1)(a) Only diesel fuel oil may be used as a fuel in Generator G3. (b) Only natural gas may be used as a fuel in Generators G11 and G14. [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever particulate matter emissions testing is required, the permittee shall use: (a) EPA Method 5 to test for noncondensible particulate matter, and EPA Method 202 to test for condensible particulate matter emissions; or (b) other methods approved by the Department in writing. [ss. NR 407.09(1)(c)1.a. and 439.06(1), Wis. Adm. Code; est. in 445031180-P20] (2) The permittee shall keep the following records on file: (a) The Btu rating of each generator; and (b) The fuel each generator is designed to use. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

2. Pollutant: Visible Emissions

a. Limitation:

(1) 20% opacity. [ss. NR 431.04(2) and NR 431.05, Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1)(a) Only diesel fuel oil may be used as a fuel in Generator G3. (b) Only natural gas may be used as a fuel in Generators G1, G2, G4, G4A, G6, G7, G8, G9, G10, G11, G14, G17, and G18. (c) Only propane may be used as a fuel in Generator G13. [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever visible emissions testing is required, the permittee shall use US EPA Method 9, or other methods as approved by the Department in writing. [s. NR 439.06(9)(a)1., Wis. Adm. Code; est. in 445031180-P20] (2) See Condition M.1.c.(2). [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

M. Emergency Generators constructed before June 12, 2006: G1, G2, G3, G4, G4A, G6, G7, G8, G9, G10, G11, G13, G14, G17, G18

3. National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines: Part 63, Subpart ZZZZ

a. Requirements:

(1) Generator G11 is exempt from all requirements of 40 CFR Part 63, Subpart ZZZZ. [40 CFR s. 63.6590(b)(3)(iii); est. in 445031180-P20]

(2) For each generator G1, G2, G3, G4, G4A, G6, G7, G8, G9, G10, G13, G14, G17, and G18, you must meet the following requirements, except during periods of startup:
(a) change oil and filter every 500 hours of operation or annually, whichever comes first;
(b) inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and
(c) inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
(d) For generator G3, you have the option of utilizing an oil analysis program as described in 40 CFR s. 63.6625(i) in order to extend the specified oil change requirement in Condition M.3.a.(2)(a).
(e) For generators G1, G2, G4, G4A, G6, G7, G8, G9, G10, G13, G14, G17, and G18, you have the option of utilizing an oil analysis program as described in 40 CFR s. 63.6625(j) in order to extend the specified oil change requirement in Condition M.3.a.(2)(a).
(f) If the emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements in Conditions M.3.a.(2)(a), (b) and (c) on the schedule required, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. The permittee must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.
[s. 285.65(13), Wis. Stats.; 40 CFR s. 63.6602 and Table 2c to Subpart ZZZZ; est. in 445031180-P20]

(3) s. 63.6605: What are my general requirements for complying with Subpart ZZZZ?[20]
(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.6605; est. in 445031180-P20]

(4) s. 63.6625: What are my monitoring, installation, collection, operation, and maintenance requirements?
(e) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. This requirement applies to generators G1, G2, G3, G4, G4A, G6, G7, G8, G9, G10, G13, G14, G17, and G18.
(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter if one is not already installed. This requirement applies to generators G1, G2, G3, G4, G4A, G6, G7, G8, G9, G10, G13, G14, G17, and G18.
(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to Subpart ZZZZ apply. This requirement applies to generators G1, G2, G3, G4, G4A, G6, G7, G8, G9, G10, G13, G14, G17, and G18.
[s. 285.65(13), Wis. Stats.; 40 CFR s.63.6625; est. in 445031180-P20]

(5) s. 63.6640: How do I demonstrate continuous compliance with the emission limitations and operating limitations?
(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the

[20] The labeling of conditions from this point forward generally follows the labeling in Subpart ZZZZ, and hence is not sequential. Gaps occur in the letter sequence of conditions because some provisions of Subpart ZZZZ do not apply to these engines and therefore are not included in this table.

M. Emergency Generators constructed before June 12, 2006: G1, G2, G3, G4, G4A, G6, G7, G8, G9, G10, G11, G13, G14, G17, G18

requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary RICE under Subpart ZZZZ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under Subpart ZZZZ and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraph (f)(2)(i) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
[s. 285.65(13), Wis. Stats.; 40 CFR s. 63.6640; est. in 445031180-P20]

(6) s. 63.6655: What records must I keep?

(d) You must keep the records required in Table 6 of Subpart ZZZZ to show continuous compliance with each emission or operating limitation that applies to you. In accordance with Table 6, you must demonstrate continuous compliance by:
i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or
ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate an existing stationary emergency RICE.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

[s. 285.65(13), Wis. Stats.; 40 CFR s. 63.6655; est. in 445031180-P20]

(7) Definitions

"Emergency stationary RICE" means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under Subpart ZZZZ.
(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.
(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as

M. Emergency Generators constructed before June 12, 2006: G1, G2, G3, G4, G4A, G6, G7, G8, G9, G10, G11, G13, G14, G17, G18

specified in §63.6640(f).
(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §63.6640(f)(2)(ii) or (iii) and §63.6640(f)(4)(i) or (ii).

[s. 285.65(13), Wis. Stats.; 40 CFR s. 63.6675; est. in 445031180-P20]

N. Emergency Generators constructed on or after June 12, 2006: G5, G12, G15 and G16

1. Pollutant: Particulate Matter Emissions

a. Limitation:

(1) Limitation for Generator G16: No person may cause, allow or permit the emissions of particulate matter to the ambient air from stationary or semistationary gasoline or diesel powered internal combustion reciprocating engines in excess of 0.50 pound of particulate per million Btu heat input. [s. NR 485.055, Wis. Adm. Code; est. in 445031180-P20]

(2) Limitation for Generators G5 and G15: 0.15 pounds of particulate matter per million Btu heat input. [s. NR 415.06(2)(a), Wis. Adm. Code; est. in 445031180-P20]

(3) Generator G12 is not subject to a particulate matter emission limit because the generator has a maximum heat input of less than one million Btu per hour, and does not burn gasoline or diesel fuel. [ss. NR 415.06 and NR 485.055, Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1)(a) Only diesel fuel oil may be used as a fuel in Generator G16. (b) Only natural gas may be used as a fuel in Generators G5 and G15. [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever particulate matter emissions testing is required, the permittee shall use: (a) EPA Method 5 to test for noncondensible particulate matter, and EPA Method 202 to test for condensible particulate matter emissions; or (b) other methods approved by the Department in writing. [ss. NR 407.09(1)(c)1.a. and 439.06(1), Wis. Adm. Code; est. in 445031180-P20] (2) The permittee shall keep the following records on file: (a) The Btu rating of each generator; and (b) The fuels each generator is designed to use. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

2. Pollutant: Visible Emissions

a. Limitation:

(1) 20% opacity. [s. NR 431.05, Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1)(a) Only diesel fuel oil may be used as a fuel in Generator G16. (b) Only natural gas may be used as a fuel in Generators G5, G12 and G15. [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever visible emissions testing is required, the permittee shall use US EPA Method 9, or other methods as approved by the Department in writing. [s. NR 439.06(9)(a)1., Wis. Adm. Code; est. in 445031180-P20] (2) See Condition N.1.c.(2). [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

N. Emergency Generators constructed on or after June 12, 2006: G5, G12, G15 and G16

3. Pollutant: 40 CFR Part 60, Subpart JJJJ - New Source Performance Standards for Generators G5 and G15

a. Limitations: [21]

(1) Emissions of nitrogen oxides from Generators G5 and G15 may not exceed:
(a) 2.0 grams per horsepower-hour (g/HP-hr); or
(b) 160 parts per million dry volume (ppmvd) at 15% oxygen (O_2).
[s. 285.65(13), Wis. Stats.; 40 CFR ss. 60.4233(e); Table 1 to 40 CFR Part 60, Subpart JJJJ; est. in 445031180-P20]

(2) Emissions of carbon monoxide from Generator G5 may not exceed:
(a) 4.0 g/HP-hr; or
(b) 540 ppmvd at 15% O_2; or
(c) 4.4 grams per kilowatt-hour (g/KW-hr).
[s. 285.65(13), Wis. Stats.; 40 CFR ss. 60.4233(e); Table 1 to 40 CFR Part 60, Subpart JJJJ; 40 CFR s. 1048.101(a)(2); est. in 445031180-P20]

(3) Emissions of carbon monoxide from Generator G15 may not exceed:
(a) 4.0 g/HP-hr; or
(b) 540 ppmvd at 15% O_2.
[s. 285.65(13), Wis. Stats.; 40 CFR ss. 60.4233(e); Table 1 to 40 CFR Part 60, Subpart JJJJ; est. in 445031180-P20]

(4) Emissions of volatile organic compounds from Generators G5 and G15 may not exceed:
(a) 1.0 g/HP-hr; or
(b) 86 ppmvd at 15% O_2.
[s. 285.65(13), Wis. Stats.; 40 CFR ss. 60.4233(e); Table 1 to 40 CFR Part 60, Subpart JJJJ; est. in 445031180-P20]

(5) Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O_2. [s. 285.65(13), Wis. Stats.; Table 1 to 40 CFR Part 60, Subpart JJJJ; est. in 445031180-P20]

b. Compliance Demonstration:

(1) Starting on January 1, 2011, if Generator G15 does not meet the standards applicable to non-emergency engines, the permittee must install a non-resettable hour meter. [s.285.65(13), Wis. Stats.; 40 CFR s. 60.4237(b); est. in 445031180-P20]

(2) You must demonstrate compliance for Generators G5 and G15 according to one of the methods specified in paragraph (a) or (b) below:

(a) Keep records showing that the generator has been certified according to procedures specified in 40 CFR Part 60, Subpart JJJJ, for the same model year; and demonstrate compliance according to one of the methods specified in 40 CFR s. 60.4243(a). These methods are as follows:
(i) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance.
(ii) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

(b) Keep records showing that the generator is a non-certified engine; and demonstrate compliance with the emission standards

[21] Emergency Generator G12 is not subject to emission limits in 40 CFR Part 60, Subpart JJJJ because it was manufactured before January 1, 2009. [40 CFR s. 60.4230(a)(4)(iv)]

N. Emergency Generators constructed on or after June 12, 2006: G5, G12, G15 and G16

3. Pollutant: 40 CFR Part 60, Subpart JJJJ - New Source Performance Standards for Generators G5 and G15

specified in 40 CFR s. 60.4233(e) according to the requirements specified in 40 CFR s. 60.4244, as applicable, and according to the following paragraph (i):

(i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.
[s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4243(a) and (b); est. in 445031180-P20]

(3) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (a) through (c) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart JJJJ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (a) through (c) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (a) through (c) of this section, the engine will not be considered an emergency engine under Subpart JJJJ and must meet all requirements for non-emergency engines.

(a) There is no time limit on the use of emergency stationary ICE in emergency situations.

(b) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraph (i) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (c) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (b).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (b) of this section. Except as provided in paragraph (c)(i) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.
[s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4243(d); est. in 445031180-P20]

c. Reference Test Methods, Record keeping, and Monitoring:

(1)(a) Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in 40 CFR s. 60.4244.
(b) Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.
[s. 285.65(13), Wis. Stats.; 40 CFR ss. 60.4244 and 60.4245(d); est. in 445031180-P20]

N. Emergency Generators constructed on or after June 12, 2006: G5, G12, G15 and G16

3. Pollutant: 40 CFR Part 60, Subpart JJJJ - New Source Performance Standards for Generators G5 and G15

(2) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a) through (d) of this section.
(a) All notifications submitted to comply with Subpart JJJJ and all documentation supporting any notification.
(b) Maintenance conducted on the engine.
(c) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.
(d) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.
[s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4245(a); est. in 445031180-P20]

(3) If Generator G15 does not meet the standards applicable to non-emergency engines, the permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4245(b); est. in 445031180-P20]

(4) If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR s. 60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in 40 CFR s. 60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs (a) through (c) of this section.

(a) The report must contain the following information:
(i) Company name and address where the engine is located.
(ii) Date of the report and beginning and ending dates of the reporting period.
(iii) Engine site rating and model year.
(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
(v) Hours operated for the purposes specified in 40 CFR s. 60.4243(d)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR s. 60.4243(d)(2)(ii) and (iii).
(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in 40 CFR s. 60.4243(d)(2)(ii) and (iii).
(vii) Hours spent for operation for the purposes specified in 40 CFR s. 60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR s. 60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(b) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(c) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to Subpart JJJJ is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR s. 60.4.
[s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4245(e); est. in 445031180-P20]

N. Emergency Generators constructed on or after June 12, 2006: G5, G12, G15 and G16

4. Pollutant: 40 CFR Part 60, Subpart IIII - New Source Performance Standards for Generator G16

a. Limitations:

(1) Emissions of non-methane hydrocarbons and nitrogen oxides combined may not exceed 10.5 grams per kilowatt-hour (7.8 grams per horsepower-hour). [s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4205(c); Table 4 to 40 CFR Part 60, Subpart IIII; est. in 445031180-P20]

(2) Emissions of carbon monoxide may not exceed 3.5 grams per kilowatt-hour (2.6 grams per horsepower-hour). [s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4205(c); Table 4 to 40 CFR Part 60, Subpart IIII; est. in 445031180-P20]

(3) Emissions of particulate matter may not exceed 0.54 grams per kilowatt-hour (0.40 grams per horsepower-hour). [s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4205(c); Table 4 to 40 CFR Part 60, Subpart IIII; est. in 445031180-P20]

(4) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to Subpart IIII with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. [s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4207(b); 445031180-P20]

b. Compliance Demonstration:

(1) You must do all of the following, except as permitted under Condition N.4.b.(3):
(a) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
(b) Change only those emission-related settings that are permitted by the manufacturer; and
(c) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

[s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4211(a); 445031180-P20]

(2) You must operate the emergency stationary ICE according to the requirements in paragraphs (2)(a) through (c) of this section. In order for the engine to be considered an emergency stationary ICE under Subpart IIII, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (2)(a) through (c) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (2)(a) through (c) of this section, the engine will not be considered an emergency engine under Subpart IIII and must meet all requirements for non-emergency engines.

(a) There is no time limit on the use of emergency stationary ICE in emergency situations.

(b) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraph (2)(b)(i) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (2)(c) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (2)(b).
(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (2)(b) of this section. Except as provided in paragraph (2)(c)(i) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage

N. Emergency Generators constructed on or after June 12, 2006: G5, G12, G15 and G16

4. Pollutant: 40 CFR Part 60, Subpart IIII - New Source Performance Standards for Generator G16

collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.
[s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4211(f); 445031180-P20]

(3) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(a) You must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.
[s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4211(g)(2); 445031180-P20]

c. Reference Test Methods, Record keeping, and Monitoring:

(1) Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests must follow the procedures in 40 CFR s. 60.4212. [s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4212; est. in 445031180-P20]

(2) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine. [s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4209(a); 445031180-P20]

(3) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4209(b); 445031180-P20]

(4) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached. [s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4214(c); 445031180-P20]

(5) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR s. 60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in 40 CFR s. 60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (5)(a) through (c) of this section.

(a) The report must contain the following information:
(i) Company name and address where the engine is located.
(ii) Date of the report and beginning and ending dates of the reporting period.
(iii) Engine site rating and model year.
(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
(v) Hours operated for the purposes specified in 40 CFR s. 60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR s. 60.4211(f)(2)(ii) and (iii).
(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in 40 CFR s. 60.4211(f)(2)(ii) and (iii).
(vii) Hours spent for operation for the purposes specified in 40 CFR s. 60.4211(f)(3)(i), including the date, start time, and end

N. Emergency Generators constructed on or after June 12, 2006: G5, G12, G15 and G16

4. Pollutant: 40 CFR Part 60, Subpart IIII - New Source Performance Standards for Generator G16

time for engine operation for the purposes specified in 40 CFR s. 60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(b) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(c) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to Subpart IIII is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR s. 60.4.
[s. 285.65(13), Wis. Stats.; 40 CFR s. 60.4214(d); 445031180-P20]

O. Stack S501, Process P501, Control Device C501: Dry Sorbent Injection (DSI) Storage Silo Bin Vent
Stacks S502A, S502B, Process P502, Control Device C502[22]: Ash Storage Silo Load-In Baghouse
Stack S503, Process P503, Control Device C503: Ash Storage Silo Bin Vent
To be installed in 2015-2016 under permit 14-DMM-191.

1. Pollutant: Particulate Matter/PM_{10}/$PM_{2.5}$ Emissions

a. Limitation:

(1) Particulate matter emissions from stacks S501 and S503 may not exceed the more restrictive of:
(a) The value of E in the equation $E = 3.59 \times P^{0.62}$; where E = allowable particulate matter emission rate, in pounds per hour; and P = Process weight as defined in s. NR 415.02(5), Wis. Adm. Code; and
(b) 0.40 pounds per 1,000 pounds of exhaust gas.
[ss. NR 415.05(1)(o) and (2), Wis. Adm. Code; 14-DMM-191]

(2) Particulate matter emissions from stacks S502A and S502B may not exceed the more restrictive of:
(a) The value of E in the equation $E = 3.59 \times P^{0.62}$; where E = allowable particulate matter emission rate, in pounds per hour; and P = Process weight as defined in s. NR 415.02(5), Wis. Adm. Code; and
(b) 0.20 pounds per 1,000 pounds of exhaust gas.
[ss. NR 415.05(1)(m) and (2), Wis. Adm. Code; 14-DMM-191]

(3) Particulate matter, PM_{10} and $PM_{2.5}$ emissions may not exceed:
(a) 0.030 pounds per hour from stack S501;
(b) 0.044 pounds per hour each from stacks S502A and S502B; and
(c) 0.021 pounds per hour from stack S503.
[ss. NR 404.04(8) and (9), and NR 404.05(3)(a), Wis. Adm. Code, and ss. 285.65(3) and (7), Wis. Stats.; 14-DMM-191]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) The permittee shall operate bin vent filters to control particulate emissions from processes P501 and P503 at all times the processes are in operation. [s. 285.65(3), Wis. Stats.; 14-DMM-191] (2) The permittee shall inspect baghouse P502 and the bin vent filters for processes P501 and P503 at least once per year, or as recommended by the manufacturer's operation and maintenance manual, whichever is more frequent. [s. 285.65(3), Wis. Stats.; 14-DMM-191] (3) The permittee shall install, calibrate and maintain a device to measure the pressure drop across baghouse P502. [s. NR 439.055(1)(a), Wis. Adm. Code; 14-DMM-191] (4)(a) The permittee shall determine the normal operating pressure drop range for baghouse C502 based on manufacturer's recommendations, operational observations, observations during stack testing (if applicable), and regulatory requirements and submit these ranges to the Department for approval within 90 days after the date of initial startup of the baghouse; and (b) When operating baghouse C502, the permittee shall maintain the pressure drop across the baghouse within the range identified in (a), above. [s. 285.65(3), Wis. Stats.; 14-DMM-191]	(1) Whenever particulate matter emissions testing is required, the permittee shall use EPA Method 5 to test for filterable particulate matter and EPA Method 202 to test for condensible particulate matter emissions, or an alternate method approved in writing by the Department. [ss. NR 407.09(1)(c)1.a. and NR 439.06(1), Wis. Adm. Code; 14-DMM-191] (2) Whenever compliance emission testing is required, the permittee shall use EPA Test Method 201A for filterable and EPA Method 202 for condensible particulate, or an alternate method approved in writing by the Department. [s. NR 439.06(8), Wis. Adm. Code; 14-DMM-191] (3) The permittee shall measure and record the pressure drop across baghouse C502 once for every 8 hours of source operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055(2)(b)1., Wis. Adm. Code; 14-DMM-191] (4) The permittee shall maintain records of inspections, maintenance and repairs of the control devices, including the date and description of the actions taken. [s. NR 439.04(1)(d), Wis. Adm. Code; 14-DMM-191]

[22] Process P502 and Control Device C502 both represent a baghouse used to pull ash and load it into the ash silo. The baghouse is both the process and the control device.

O. Stack S501, Process P501, Control Device C501: Dry Sorbent Injection (DSI) Storage Silo Bin Vent
Stacks S502A, S502B, Process P502, Control Device C502[22]: Ash Storage Silo Load-In Baghouse
Stack S503, Process P503, Control Device C503: Ash Storage Silo Bin Vent
To be installed in 2015-2016 under permit 14-DMM-191.

2. Pollutant: Visible Emissions

a. Limitation:
(1) 20% Opacity. [s. NR 431.05, Wis. Adm. Code; 14-DMM-191]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
(1) See Conditions O.1.b.(1) to (4) for particulate matter emissions. [s. 285.65(3), Wis. Stats.; 14-DMM-191]	(1) Whenever compliance emission testing is required, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 14-DMM-191] (2) See Conditions O.1.c.(3) and (4) for particulate matter emissions. [s. NR 439.04(1)(d), Wis. Adm. Code; 14-DMM-191]

P. Stack S504, Fugitive F504: Ash storage silo load-out to trucks
Stack S505, Fugitive F505: Sorbent delivery truck traffic
Stack S506, Fugitive F506: Sorbent ash production truck traffic
To be installed in 2015 under permit 14-DMM-191.

1. Pollutant: Particulate Matter Emissions

a. Limitation:
(1) No person may cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne, nor may a person allow a structure, a parking lot, or a road to be used, constructed, altered, repaired, sand blasted, or demolished without taking such precautions. [s. NR 415.04, Wis. Adm. Code; 14-DMM-191]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) The permittee shall take precautions to prevent particulate matter from becoming airborne. Such precautions shall include but are not limited to: (a) Application of water or suitable chemicals or plastic covering on dirt roads, material stockpiles or other surfaces which can create airborne dust, provided such application does not create hydrocarbon, odor, or water pollution problems. (b) Covering or securing of materials likely to become airborne. (c) The paving or maintenance of roadway areas so as not to create air pollution. [s. 285.65(3), Wis. Stats. and s. NR 415.04(1), Wis. Adm. Code; 14-DMM-191]	(1) The permittee shall keep records of all precautions taken to prevent fugitive dust. [s. NR 439.04(1)(d), Wis. Adm. Code]

2. Pollutant: Visible Emissions

a. Limitation:
(1) 20% Opacity. [s. NR 431.05, Wis. Adm. Code; 14-DMM-191]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) See Condition P.1.b.(1) for particulate matter emissions. [s. 285.65(3), Wis. Stats.; 14-DMM-191]	(1) Whenever compliance emission testing is required, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code; 14-DMM-191] (2) See Condition P.1.c.(1) for particulate matter emissions. [s. NR 439.04(1)(d), Wis. Adm. Code; 14-DMM-191]

Q. Stack S39 P39
25 MGD Wastewater Treatment Plant

1. Pollutant: *Chloroform and *Acetaldehyde

a. Limitation:

*(1)(a) Chloroform emissions shall be controlled using Best Available Control Technology (BACT).
(b) Within 180 days of the issuance of this permit, the permittee shall submit to the Department:
(i) a chloroform BACT proposal for Process P39; and
(ii) an application for revision of the permittee's Title V permit to incorporate BACT requirements for Process P39.
(iii) As an alternative to submittal of a chloroform BACT proposal, the permittee may submit documentation of compliance with the NR 445 chloroform control requirements through one of the methods in ss. NR *445.08(2)(a), (c), or (d).
[s. NR *445.08(2), Wis. Adm. Code; est. in 445031180-P20]

*(2)(a) Acetaldehyde emissions shall be controlled using Best Available Control Technology (BACT).
(b) Within 180 days of the issuance of this permit, the permittee shall submit to the Department:
(i) an acetaldehyde BACT proposal for Process P39; and
(ii) an application for revision of the permittee's Title V permit to incorporate BACT requirements for Process P39.
(iii) As an alternative to submittal of an acetaldehyde BACT proposal, the permittee may submit documentation of compliance with the NR 445 acetaldehyde control requirements through one of the methods in ss. NR *445.08(2)(a), (c), or (d).
[s. NR *445.08(2), Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	**c. Reference Test Methods, Record keeping, and Monitoring**
*(1) The permittee shall submit the BACT proposals or alternative compliance demonstrations and Title V revision applications required in Conditions Q.1.a.(1) and (2) within 180 days of the issuance of this permit. [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	*(1) Whenever acetaldehyde or chloroform emissions testing is required, the permittee shall use methods approved, in advance, by the Department. [s. NR 439.06(8), Wis. Adm. Code; est. in 445031180-P20]

R. Fugitive F01: Coal/Petroleum Coke Storage and Transfer Operations

1. Pollutant: Particulate Matter/PM_{10} Emissions

a. Limitation:
(1) The permittee may not cause, allow, or permit any materials to be handled, transported, or stored without taking precautions to prevent particulate matter from becoming airborne. Nor may the permittee allow a structure, a parking lot, or a road to be used, constructed, altered, repaired, sand blasted, or demolished without taking such precautions. [s. NR 415.04, Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) The permittee shall develop and implement the plan required by Condition R.3.b.(1). [ss. NR 407.09(4)(a)1. and NR 415.04(1)(b), Wis. Adm. Code; est. in 445031180-P20]	**(1)** The permittee shall keep the records required by Condition R.3.c.(1). [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

2. Pollutant: Visible Emissions

a. Limitation:
(1) 20% Opacity. [s. NR 431.04(2), Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) The permittee shall develop and implement the plan required by Condition R.3.b.(1). [s. NR 407.09(4)(a)1., Wis. Adm. Code; est. in 445031180-P20]	(1) Whenever compliance emission testing is required, the permittee shall use US EPA Method 9. [s. NR 439.06(9)(a)1., Wis. Adm. Code; est. in 445031180-P20] (2) The permittee shall keep the records required by Condition R.3.c.(1). [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

3. Pollutant: NR *445 Requirements

a. Limitation:
(1) *The permittee shall have the ability to control, in a timely manner, outdoor fugitive coal dust emissions in an effort to prevent emissions off the source property. [s. NR *445.10(2)(a), Wis. Adm. Code; est. in 445031180-P20]

b. Compliance Demonstration	c. Reference Test Methods, Record keeping, and Monitoring
(1) *The permittee shall maintain and implement a plan to control outdoor fugitive coal dust emissions in an effort to prevent emissions off the source property. The plan shall include all of the following: (a) Identification of all sources of outdoor fugitive coal dust emissions from coal handling and coal storage piles on the source property. (b) A description of the measures that can be taken to control, in a timely manner, outdoor fugitive coal dust emissions from all sources identified under Condition R.3.b.(1)(a) under the following conditions: (i) Routine operations. (ii) Periods of high activity. (iii) Periods of increased probability of outdoor fugitive dust emissions. (iv) When equipment used to control outdoor fugitive coal dust emissions malfunctions. [s. NR *445.10(2)(b), Wis. Adm. Code; est. in 445031180-P20]	(1)(a) The permittee shall keep records of all actions taken to control outdoor fugitive coal dust emissions in accordance with s. NR 439.04(2), Wis. Adm. Code. (b) The permittee shall keep a copy of the plan described in Condition R.3.b.(1). (c) These records shall be kept at the facility and shall be available for inspection upon request. [ss. NR *445.10(2)(c) and (d), Wis. Adm. Code; est. in 445031180-P20]

R. Fugitive F01: Coal/Petroleum Coke Storage and Transfer Operations

4. Pollutant: Particulate Matter/PM_{10} Emissions Requirements from Consent Order EPA-5-16-113(a)-WI-01[23]

18. "Building Time" shall refer to the period of time that begins upon Expera receiving deliveries of Coal for purposes of constructing the Winter Coal Pile and ending upon the completion of building the Winter Coal Pile. The building of the Winter Coal Pile shall occur between September and December.

19. "Coal" shall mean either coal or the blend of coal and petroleum coke combusted at the facility. Coal is used as fuel in Expera's process and may become airborne.

20. "Facility" shall mean the Expera facility located at 600 Thilmany Road, Kaukauna, Wisconsin.

21. "Freezing Operating Conditions" shall mean when ambient temperatures are at or below 32 degrees Fahrenheit as recorded at the Appleton International Airport, W 6390 Challenger Drive, Appleton WI or are forecast to be at or below 32 degrees Fahrenheit.

22. "Fugitive Dust" shall mean any solid particulate matter that becomes airborne by natural or human-made activities in the Storage Pile Area.

23. "Operating permit" shall mean the WDNR issued Part 70 Operating permit, currently Number 4450311180-P12, or any successor permit.

24. "Storage Pile Area" shall mean the area on the northwest side of the Facility, containing the Winter Coal Pile and the Working Coal Pile, as identified in Appendix A- Map of the Expera Facility, including Proposed Wind Fence Location.

25. "U.S. EPA" shall mean the United States Environmental Protection Agency.

26, "WDNR" shall mean the Wisconsin Department of Natural Resources.

27. "Wind Fence" shall refer to an engineered fabric fence structure, designed for wind reduction and to reduce Fugitive Dust.

28. "Winter Coal Pile" shall mean the Coal storage pile constructed by the Facility to ensure the availability of usable coal during winter conditions.

29. "Working Coal Pile" shall mean coal designated for short term storage such as daily use, weekends, and holidays.

34. After September 15, 2016, Expera shall not accept any deliveries of petroleum coke at the facility unless either:
a. Expera has completed construction of a Wind Fence adjacent to the Storage Pile Area in the area set forth in Appendix A - Map of the Expera Facility, including Proposed Wind Fence Location; or
b. Expera temporarily installs at least one continuous Federal Equivalent Method (FEM) real-time particulate matter (PM_{10}) monitor and at least one Federal Reference Method (FRM) PM_{10} filter-based monitor operating every third day, as detailed in Appendix B to Consent Order (EPA-5-16-113(a)-WI-01).

35. Expera shall meet the following project milestones for Wind Fence construction:
a. Issuance of purchase order to Wind Fence vendor by June 1, 2016, except as noted in Paragraph 36.;
b. Begin construction of the Wind Fence by August 1, 2016, except as noted in Paragraph 36.;
c. Finish construction of the Wind Fence by no later than September 15, 2016, except as noted in Paragraph 40. For each milestone completion listed in Paragraph 35., Expera shall provide confirmation in writing and corresponding documentation to EPA, at the address referenced in Paragraph 50 of Consent Order EPA-5-16-113(a)-WI-01 within 10 days after the completion of the milestone.

36. If Wind Fence project milestone dates for Paragraphs 35.a. or 35.b. are not met, Expera will notify EPA of the delay within 10 days.

37. Expera shall develop a performance demonstration plan for the Wind Fence to be included in the revised permit application

[23] U.S. EPA Administrative Consent Order EPA-5-16-113(a)-WI-01 requires that Expera submit a revised permit application to DNR requesting incorporation of the definitions set forth in Paragraphs 18.-29. and the Enhanced Fugitive Dust Program set forth in Paragraphs 34.-47. into its operation permit.

R. Fugitive F01: Coal/Petroleum Coke Storage and Transfer Operations

required under Paragraph 48. of Consent Order EPA-5-16-113(a)-WI-01. The performance demonstration plan will include the use of EPA Method 22 visual observations done weekly at the property line of the Facility for one year following the completion of the Wind Fence. See Map in Appendix A - Map of the Expera Facility. The Wind Fence performance demonstrations shall be done to ensure the Wind Fence mitigates Fugitive Dust. Frequency and duration of observations may be increased by the Wisconsin Department of Natural Resources during the submission and approval process required by Paragraph 48. of Consent Order EPA-5-16-113(a)-WI-01. Records of the performance demonstration plans for the Wind Fence will be retained according to a schedule determined by the Wisconsin Department of Natural Resources.

38. Expera shall develop a Wind Fence inspection procedure to be included in the revised permit application as required under Paragraph 48. of Consent Order EPA-5-16-113(a)-WI-01. The Wind Fence inspection shall be done to ensure proper operation of the Wind Fence. Maintenance records of the Wind Fence will be retained according to a schedule determined with the Wisconsin Department of Natural Resources. Inspections of the Wind Fence shall occur twice a month. Any necessary, corrective actions identified during the inspection shall be executed as soon as practicable. If the Wind Fence repairs take longer than 10 days, Expera shall keep a record of the repair process and justification for the repair time.

39. Expera shall submit a report to EPA by October 15, 2016, certifying that by September 15, 2016, it has either completed construction of the Wind Fence as set for in Paragraph 34.a. or it has ceased receipt of petroleum coke until such time construction of the Wind Fence is completed or, as set forth in Paragraph 34.b. ambient air quality monitors are installed.

40. If construction of the Wind Fence occurs after September 15, 2016, Expera will notify EPA, within 30 days, when construction is complete; notifications related to the installation of ambient air monitors are addressed in Appendix B of Consent Order EPA-5-16-113(a)-WI-01.

41. Expera shall not store Coal in the Winter Coal Pile at the Facility during the months of June through August, commencing as of the effective date of Consent Order EPA-5-16-113(a)-WI-01.

42. Expera shall limit the size of the Winter Coal Pile to six thousand (6,000) tons. Expera shall document and maintain records of the maximum size of the Winter Coal Pile.

43. Except as provided in Paragraph 44., Expera shall limit the Winter Coal Pile Building Time to six (6) weeks. Expera shall document and maintain records of the Building Time start and end date for the Winter Coal Pile.

44. In the event that Expera is unable to complete construction of the Winter Coal Pile within 6 weeks due to circumstances beyond its control, such as availability of Coal from its supplier, Expera will complete construction as soon as possible. During the term of this Order, Expera will report any delays in construction of the Winter Coal Pile to EPA. Provided that construction of the Winter Coal Pile is completed in accordance with the notifications provided to EPA, Expera will be in material compliance with this Order for purposes of Paragraphs 49. and 57. of Consent Order EPA-5-16-113(a)-WI-01.

45. Expera shall apply a polymer sealant to the Winter Coal Pile, as soon as practicable, at the end of the Building Time.

46. The Working Coal Pile is permitted year round but limited to not exceed 2,600 tons.

47. Expera shall continue its practice of using a sweeper vacuum, as needed, in the Storage Pile Area and on the exit/entrance to the Storage Pile Area, except during periods of sufficient precipitation (rain or snow) or Freezing Operating Conditions.

[Administrative Consent Order EPA-5-16-113(a)-WI-01 and 14-DMM-191-R1]

AAA. 40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers and Process Heaters. Boilers B07, B09 and B11

These Requirements Apply On And After January 31, 2017.

1. Compliance Date, Emission Limitations, Work Practice Standards, and Operating Limits[24]

40 CFR 63.7495: When do I have to comply with 40 CFR Part 63, Subpart DDDDD?

(b) You must comply with Subpart DDDDD no later than January 31, 2017. [s. 285.65(13), Wis. Stats.; 40 CFR 63.6(i) and 63.7495(b); s. NR 460.05(7), Wis. Adm. Code; 14-DMM-191]

(h) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory after the compliance date of Subpart DDDDD, you must be in compliance with the applicable existing source provisions of Subpart DDDDD on the effective date of the fuel switch or physical change.

40 CFR 63.7500: What emission limitations, work practice standards, and operating limits must I meet?

(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b) through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

(1) You must meet each emission limit and work practice standard in Tables 1 through 3, and 11 through 13 to Subpart DDDDD that applies to your boiler or process heater, for each boiler or process heater subject to Subpart DDDDD at your source, except as provided under 40 CFR 63.7522. The output-based emission limits, in units of pounds per million Btu of steam output, in Tables 1 or 2 to Subpart DDDDD are an alternative applicable only to boilers and process heaters that generate either steam, cogenerate steam with electricity, or both. The output-based emission limits, in units of pounds per megawatt-hour, in Tables 1 or 2 to Subpart DDDDD are an alternative applicable only to boilers that generate only electricity. Boilers that perform multiple functions (cogeneration and electricity generation) or supply steam to common headers would calculate a total steam energy output using equation 21 of 40 CFR s. 63.7575 to demonstrate compliance with the output-based emission limits, in units of pounds per million Btu of steam output, in Tables 1 or 2 to Subpart DDDDD.

(2) You must meet each operating limit in Table 4 to Subpart DDDDD that applies to your boiler or process heater. If you use a control device or combination of control devices not covered in Table 4 to Subpart DDDDD, or you wish to establish and monitor an alternative operating limit or an alternative monitoring parameter, you must apply to the EPA Administrator for approval of alternative monitoring under 40 CFR 63.8(f).

(3) At all times, you must operate and maintain any affected source (as defined in 40 CFR 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) As provided in 40 CFR 63.6(g), EPA may approve use of an alternative to the work practice standards in this section.

(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in 40 CFR 63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to Subpart DDDDD, the annual tune-up, or the energy assessment requirements in Table 3 to Subpart DDDDD, or the operating limits in Table 4 to Subpart DDDDD.

(d) Boilers and process heaters with a heat input capacity of less than or equal to 5 million Btu per hour in the units designed to burn gas 2 (other) fuels subcategory or units designed to burn light liquid fuels subcategory must complete a tune-up every 5 years as specified in 40 CFR 63.7540.

(e) Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in 40 CFR 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10

[24] The labeling of conditions in this table generally follows the labeling in Subpart DDDDD, and hence is not sequential. Gaps may occur in the letter sequence of conditions because some provisions of Subpart DDDDD do not apply to this facility and therefore are not included in this table.

AAA. 40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers and Process Heaters. Boilers B07, B09 and B11

These Requirements Apply On And After January 31, 2017.

million Btu per hour must complete a tune-up every 2 years as specified in 40 CFR 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to Subpart DDDDD, or the operating limits in Table 4 to Subpart DDDDD.

(f) These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with items 5 and 6 of Table 3 to Subpart DDDDD.
[s. 285.65(13), Wis. Stats.; 40 CFR 63.7500; 14-DMM-191]

2. *Reserved.*

3. General Compliance Requirements

a. Conditions:

40 CFR 63.7505: What are my general requirements for complying with Subpart DDDDD?

(a) You must be in compliance with the emission limits, work practice standards, and operating limits in Subpart DDDDD. These emission and operating limits apply to you at all times the affected unit is operating except for the periods noted in 40 CFR 63.7500(f).

(c) You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or continuous monitoring systems (CMS), including a continuous emission monitoring system (CEMS), continuous opacity monitoring system (COMS), continuous parameter monitoring system (CPMS), or particulate matter continuous parameter monitoring system (PM CPMS), where applicable. You may demonstrate compliance with the applicable emission limit for hydrogen chloride (HCl), mercury, or total selected metals (TSM) using fuel analysis if the emission rate calculated according to 40 CFR 63.7530(c) is less than the applicable emission limit. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) Otherwise, you must demonstrate compliance for HCl, mercury, or TSM using performance stack testing, if subject to an applicable emission limit listed in Tables 1, 2, or 11 through 13 to Subpart DDDDD.

(d) If you demonstrate compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits through the use of CPMS, or with a CEMS or COMS, you must develop a site-specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under 40 CFR 63.8(f).

(1) For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to the Administrator for approval upon request, a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in 40 CFR 63.8(d) and the elements described in paragraphs (d)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to part 60 of this chapter and that meet the requirements of 40 CFR 63.7525. Using the process described in 40 CFR 63.8(f)(4), you may request approval of alternative monitoring system quality assurance and quality control procedures in place of those specified in this paragraph and, if approved, include the alternatives in your site-specific monitoring plan.

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations, accuracy audits, analytical drift).

(2) In your site-specific monitoring plan, you must also address paragraphs (d)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of 40 CFR 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of 40 CFR 63.8(d); and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of 40 CFR 63.10(c) (as applicable in Table 10 to Subpart DDDDD), (e)(1), and (e)(2)(i).

(3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

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(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.
(e) If you have an applicable emission limit, and you choose to comply using definition (2) of "startup" in 40 CFR s. 63.7575, you must develop and implement a written startup and shutdown plan (SSP) according to the requirements in Table 3 to Subpart DDDDD. The SSP must be maintained onsite and available upon request for public inspection.
[s. 285.65(13), Wis. Stats.; 40 CFR 63.7505; 14-DMM-191]

4. Initial Compliance Requirements

40 CFR 63.7510: What are my initial compliance requirements and by what date must I conduct them?

(a) For each boiler or process heater that is required or that you elect to demonstrate compliance with any of the applicable emission limits in Tables 1 or 2 or 11 through 13 of Subpart DDDDD through performance (stack) testing, your initial compliance requirements include all the following:
(1) Conduct performance tests according to 40 CFR 63.7520 and Table 5 to Subpart DDDDD.
(2) Conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to 40 CFR 63.7521 and Table 6 to Subpart DDDDD, except as specified in paragraphs (a)(2)(i) through (iii) of this section.
(i) For each boiler or process heater that burns a single type of fuel, you are not required to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to 40 CFR 63.7521 and Table 6 to Subpart DDDDD. For purposes of Subpart DDDDD, units that use a supplemental fuel only for startup, unit shutdown, and transient flame stability purposes still qualify as units that burn a single type of fuel, and the supplemental fuel is not subject to the fuel analysis requirements under 40 CFR 63.7521 and Table 6 to Subpart DDDDD.
(ii) When natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels, you are not required to conduct a fuel analysis of those Gas 1 fuels according to 40 CFR 63.7521 and Table 6 to Subpart DDDDD. If gaseous fuels other than natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels and those non-Gas 1 gaseous fuels are subject to another subpart of this part, part 60, part 61, or part 65, you are not required to conduct a fuel analysis of those non-Gas 1 fuels according to 40 CFR 63.7521 and Table 6 to Subpart DDDDD.
(iii) You are not required to conduct a chlorine fuel analysis for any gaseous fuels. You must conduct a fuel analysis for mercury on gaseous fuels unless the fuel is exempted in paragraphs (a)(2)(i) and (ii) of this section.
(3) Establish operating limits according to 40 CFR 63.7530 and Table 7 to Subpart DDDDD.
(4) Conduct CMS performance evaluations according to 40 CFR 63.7525.

(b) For each boiler or process heater that you elect to demonstrate compliance with the applicable emission limits in Tables 1 or 2 or 11 through 13 to Subpart DDDDD for HCl, mercury, or TSM through fuel analysis, your initial compliance requirement is to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to 40 CFR 63.7521 and Table 6 to Subpart DDDDD and establish operating limits according to 40 CFR 63.7530 and Table 8 to Subpart DDDDD. The fuels described in paragraph (a)(2)(i) and (ii) of this section are exempt from these fuel analysis and operating limit requirements. The fuels described in paragraph (a)(2)(ii) of this section are exempt from the chloride fuel analysis and operating limit requirements. Boilers and process heaters that use a CEMS for mercury or HCl are exempt from the performance testing and operating limit requirements specified in paragraph (a) of this section for the HAP for which CEMS are used.

(c) If your boiler or process heater is subject to a carbon monoxide (CO) limit, your initial compliance demonstration for CO is to conduct a performance test for CO according to Table 5 to Subpart DDDDD or conduct a performance evaluation of your continuous CO monitor, if applicable, according to 40 CFR 63.7525(a). Boilers and process heaters that use a CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to Subpart DDDDD, as specified in 40 CFR 63.7525(a), are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in paragraph (a) of this section.

(d) If your boiler or process heater is subject to a PM limit, your initial compliance demonstration for PM is to conduct a performance test in accordance with 40 CFR 63.7520 and Table 5 to Subpart DDDDD.

(e) For existing affected sources (as defined in 40 CFR 63.7490), you must complete the initial compliance demonstrations, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the compliance date that is specified for your source in 40 CFR 63.7495 and according to the applicable provisions in 40 CFR 63.7(a)(2) as cited in Table 10 to Subpart DDDDD, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in 40 CFR 63.7540(a)(10)(i) through (vi) no later than the compliance date specified in 40 CFR 63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to Subpart

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DDDDD no later than the compliance date specified in 40 CFR 63.7495.

(h) For affected sources (as defined in 40 CFR 63.7490) that ceased burning solid waste consistent with 40 CFR 63.7495(e) and for which the initial compliance date has passed, you must demonstrate compliance within 60 days of the effective date of the waste-to-fuel switch. If you have not conducted your compliance demonstration for Subpart DDDDD within the previous 12 months, you must complete all compliance demonstrations for Subpart DDDDD before you commence or recommence combustion of solid waste.

(i) For an existing EGU that becomes subject after January 31, 2016, you must demonstrate compliance within 180 days after becoming an affected source.

(j) For existing affected sources (as defined in 40 CFR 63.7490) that have not operated between the effective date of the rule and the compliance date that is specified for your source in 40 CFR 63.7495, you must complete the initial compliance demonstration, if subject to the emission limits in Table 2 to Subpart DDDDD, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the re-start of the affected source and according to the applicable provisions in 40 CFR 63.7(a)(2) as cited in Table 10 to Subpart DDDDD. You must complete an initial tune-up by following the procedures described in 40 CFR 63.7540(a)(10)(i) through (vi) no later than 30 days after the re-start of the affected source and, if applicable, complete the one-time energy assessment specified in Table 3 to Subpart DDDDD, no later than the compliance date specified in 40 CFR 63.7495.

(k) For affected sources, as defined in 40 CFR s. 63.7490, that switch subcategories consistent with 40 CFR s. 63.7545(h) after the initial compliance date, you must demonstrate compliance within 60 days of the effective date of the switch, unless you had previously conducted your compliance demonstration for this subcategory within the previous 12 months.
[s. 285.65(13), Wis. Stats.; 40 CFR 63.7510; 14-DMM-191]

5. Subsequent Performance Tests, Fuel Analyses, and Tune-Ups

40 CFR 63.7515: When must I conduct subsequent performance tests, fuel analyses, or tune-ups?

(a) You must conduct all applicable performance tests according to 40 CFR 63.7520 on an annual basis, except as specified in paragraphs (b) through (e), (g), and (h) of this section. Annual performance tests must be completed no more than 13 months after the previous performance test, except as specified in paragraphs (b) through (e), (g), and (h) of this section.

(b) If your performance tests for a given pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to Subpart DDDDD, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, you may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test. If you elect to demonstrate compliance using emission averaging under 40 CFR 63.7522, you must continue to conduct performance tests annually. The requirement to test at maximum chloride input level is waived unless the stack test is conducted for HCl. The requirement to test at maximum mercury input level is waived unless the stack test is conducted for mercury. The requirement to test at maximum TSM input level is waived unless the stack test is conducted for TSM.

(c) If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit (as specified in Tables 1 and 2 or 11 through 13 to Subpart DDDDD) for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 2-year period meet the required level (at or below 75 percent of the emission limit, as specified in Tables 1 and 2 or 11 through 13 to Subpart DDDDD).

(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to 40 CFR 63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in 40 CFR 63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in 40 CFR 63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in 40 CFR 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up.

(e) If you demonstrate compliance with the mercury, HCl, or TSM based on fuel analysis, you must conduct a monthly fuel analysis according to 40 CFR 63.7521 for each type of fuel burned that is subject to an emission limit in Tables 1, 2, or 11 through 13 to Subpart DDDDD. You may comply with this monthly requirement by completing the fuel analysis any time within the

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calendar month as long as the analysis is separated from the previous analysis by at least 14 calendar days. If you burn a new type of fuel, you must conduct a fuel analysis before burning the new type of fuel in your boiler or process heater. You must still meet all applicable continuous compliance requirements in 40 CFR 63.7540. If each of 12 consecutive monthly fuel analyses demonstrates 75 percent or less of the compliance level, you may decrease the fuel analysis frequency to quarterly for that fuel. If any quarterly sample exceeds 75 percent of the compliance level or you begin burning a new type of fuel, you must return to monthly monitoring for that fuel, until 12 months of fuel analyses are again less than 75 percent of the compliance level. If sampling is conducted on one day per month, samples should be no less than 14 days apart, but if multiple samples are taken per month, the 14-day restriction does not apply.

(f) You must report the results of performance tests and the associated fuel analyses within 60 days after the completion of the performance tests. This report must also verify that the operating limits for each boiler or process heater have not changed or provide documentation of revised operating limits established according to 40 CFR 63.7530 and Table 7 to Subpart DDDDD, as applicable. The reports for all subsequent performance tests must include all applicable information required in 40 CFR 63.7550.

(g) For affected sources (as defined in 40 CFR 63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, you must complete the subsequent compliance demonstration, if subject to the emission limits in Tables 1, 2, or 11 through 13 to Subpart DDDDD, no later than 180 days after the re-start of the affected source and according to the applicable provisions in 40 CFR 63.7(a)(2) as cited in Table 10 to Subpart DDDDD. You must complete a subsequent tune-up by following the procedures described in 40 CFR 63.7540(a)(10)(i) through (vi) and the schedule described in 40 CFR 63.7540(a)(13) for units that are not operating at the time of their scheduled tune-up.

(i) If you operate a CO CEMS that meets the Performance Specifications outlined in 40 CFR 63.7525(a)(3) to demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to Subpart DDDDD, you are not required to conduct CO performance tests and are not subject to the oxygen concentration operating limit requirement specified in 40 CFR 63.7510(a).
[s. 285.65(13), Wis. Stats.; 40 CFR 63.7515; 14-DMM-191]

6. Stack Tests and Procedures

40 CFR 63.7520: What stack tests and procedures must I use?
(a) You must conduct all performance tests according to §63.7(c), (d), (f), and (h). You must also develop a site-specific stack test plan according to the requirements in §63.7(c). You shall conduct all performance tests under such conditions as the Administrator specifies to you based on the representative performance of each boiler or process heater for the period being tested. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests.

(b) You must conduct each performance test according to the requirements in Table 5 to Subpart DDDDD.

(c) You must conduct each performance test under the specific conditions listed in Tables 5 and 7 to Subpart DDDDD. You must conduct performance tests at representative operating load conditions while burning the type of fuel or mixture of fuels that has the highest content of chlorine and mercury, and TSM if you are opting to comply with the TSM alternative standard and you must demonstrate initial compliance and establish your operating limits based on these performance tests. These requirements could result in the need to conduct more than one performance test. Following each performance test and until the next performance test, you must comply with the operating limit for operating load conditions specified in Table 4 to Subpart DDDDD.

(d) You must conduct a minimum of three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must comply with the minimum applicable sampling times or volumes specified in Tables 1 and 2 or 11 through 13 to Subpart DDDDD.

(e) To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 at 40 CFR part 60, appendix A-7 of this chapter to convert the measured particulate matter (PM) concentrations, the measured HCl concentrations, the measured mercury concentrations, and the measured TSM concentrations that result from the performance test to pounds per million Btu heat input emission rates.

(f) Except for a 30-day rolling average based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components

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are below the method defined analytical detection level), you must use the method detection level as the measured emissions level for that pollutant in calculating compliance. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 29 fractions both for individual HAP metals and for total HAP metals) may include a combination of method detection level data and analytical data reported above the method detection level.
[s. 285.65(13), Wis. Stats.; 40 CFR 63.7520; 14-DMM-191]

7. Fuel Analyses, Fuel Specifications, and Procedures

40 CFR 63.7521: What fuel analyses, fuel specification, and procedures must I use?

(a) For solid and liquid fuels, you must conduct fuel analyses for chloride and mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to Subpart DDDDD, as applicable. For solid fuels and liquid fuels, you must also conduct fuel analyses for TSM if you are opting to comply with the TSM alternative standard. For gas 2 (other) fuels, you must conduct fuel analyses for mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to Subpart DDDDD, as applicable. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) For purposes of complying with this section, a fuel gas system that consists of multiple gaseous fuels collected and mixed with each other is considered a single fuel type and sampling and analysis is only required on the combined fuel gas system that will feed the boiler or process heater. Sampling and analysis of the individual gaseous streams prior to combining is not required. You are not required to conduct fuel analyses for fuels used for only startup, unit shutdown, and transient flame stability purposes. You are required to conduct fuel analyses only for fuels and units that are subject to emission limits for mercury, HCl, or TSM in Tables 1 and 2 or 11 through 13 to Subpart DDDDD. Gaseous and liquid fuels are exempt from the sampling requirements in paragraphs (c) and (d) of this section.

(b) You must develop a site-specific fuel monitoring plan according to the following procedures and requirements in paragraphs (b)(1) and (2) of this section, if you are required to conduct fuel analyses as specified in 40 CFR 63.7510.
(1) If you intend to use an alternative analytical method other than those required by Table 6 to Subpart DDDDD, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in 40 CFR 63.7510.
(2) You must include the information contained in paragraphs (b)(2)(i) through (vi) of this section in your fuel analysis plan.
(i) The identification of all fuel types anticipated to be burned in each boiler or process heater.
(ii) For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel analysis.
(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the composite samples if your procedures are different from paragraph (c) or (d) of this section. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types.
(iv) For each anticipated fuel type, the analytical methods from Table 6, with the expected minimum detection levels, to be used for the measurement of chlorine or mercury.
(v) If you request to use an alternative analytical method other than those required by Table 6 to Subpart DDDDD, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 shall be used until the requested alternative is approved.
(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to Subpart DDDDD.

(c) You must obtain composite fuel samples for each fuel type according to the procedures in paragraph (c)(1) or (2) of this section, or the methods listed in Table 6 to Subpart DDDDD, or use an automated sampling mechanism that provides representative composite fuel samples for each fuel type that includes both coarse and fine material. At a minimum, for demonstrating initial compliance by fuel analysis, you must obtain three composite samples. For monthly fuel analyses, at a minimum, you must obtain a single composite sample. For fuel analyses as part of a performance stack test, as specified in 40 CFR s. 63.7510(a), you must obtain a composite fuel sample during each performance test run.
(1) If sampling from a belt (or screw) feeder, collect fuel samples according to paragraphs (c)(1)(i) and (ii) of this section.
(i) Stop the belt and withdraw a 6-inch wide sample from the full cross-section of the stopped belt to obtain a minimum two pounds of sample. You must collect all the material (fines and coarse) in the full cross-section. You must transfer the sample to a clean plastic bag.
(ii) Each composite sample will consist of a minimum of three samples collected at approximately equal one-hour intervals during the testing period for sampling during performance stack testing.
(2) If sampling from a fuel pile or truck, you must collect fuel samples according to paragraphs (c)(2)(i) through (iii) of this

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section.

(i) For each composite sample, you must select a minimum of five sampling locations uniformly spaced over the surface of the pile.

(ii) At each sampling site, you must dig into the pile to a uniform depth of approximately 18 inches. You must insert a clean shovel into the hole and withdraw a sample, making sure that large pieces do not fall off during sampling; use the same shovel to collect all samples.

(iii) You must transfer all samples to a clean plastic bag for further processing.

(d) You must prepare each composite sample according to the procedures in paragraphs (d)(1) through (7) of this section.

(1) You must thoroughly mix and pour the entire composite sample over a clean plastic sheet.

(2) You must break large sample pieces (e.g., larger than 3 inches) into smaller sizes.

(3) You must make a pie shape with the entire composite sample and subdivide it into four equal parts.

(4) You must separate one of the quarter samples as the first subset.

(5) If this subset is too large for grinding, you must repeat the procedure in paragraph (d)(3) of this section with the quarter sample and obtain a one-quarter subset from this sample.

(6) You must grind the sample in a mill.

(7) You must use the procedure in paragraph (d)(3) of this section to obtain a one-quarter subsample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

(e) You must determine the concentration of pollutants in the fuel (mercury and/or chlorine and/or TSM) in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 6 to Subpart DDDDD, for use in Equations 7, 8, and 9 of Subpart DDDDD.

(f) To demonstrate that a gaseous fuel other than natural gas or refinery gas qualifies as an other gas 1 fuel, as defined in 40 CFR 63.7575, you must conduct a fuel specification analyses for mercury according to the procedures in paragraphs (g) through (i) of this section and Table 6 to Subpart DDDDD, as applicable, except as specified in paragraph (f)(1) through (4) of this section, or as an alternative where fuel specification analysis is not practical, you must measure mercury concentration in the exhaust gas when firing only the gaseous fuel to be demonstrated as an other gas 1 fuel in the boiler or process heater according to the procedures in Table 6 to Subpart DDDDD.

(1) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for natural gas or refinery gas.

(2) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gaseous fuels that are subject to another subpart of part 63, part 60, part 61, or part 65.

(3) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section on gaseous fuels for units that are complying with the limits for units designed to burn gas 2 (other) fuels.

(4) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gas streams directly derived from natural gas at natural gas production sites or natural gas plants.

(g) You must develop a site-specific fuel analysis plan for other gas 1 fuels according to the following procedures and requirements in paragraphs (g)(1) and (2).

(1) If you intend to use an alternative analytical method other than those required by Table 6 to Subpart DDDDD, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in 40 CFR 63.7510.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all gaseous fuel types other than those exempted from fuel specification analysis under (f)(1) through (3) of this section anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the identification of whether you or a fuel supplier will be conducting the fuel specification analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the samples if your procedures are different from the sampling methods contained in Table 6 to Subpart DDDDD. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types. If multiple boilers or process heaters are fueled by a common fuel stream it is permissible to conduct a single gas specification at the common point of gas distribution.

(iv) For each anticipated fuel type, the analytical methods from Table 6 to Subpart DDDDD, with the expected minimum detection levels, to be used for the measurement of mercury.

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(v) If you request to use an alternative analytical method other than those required by Table 6 to Subpart DDDDD, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 to Subpart DDDDD shall be used until the requested alternative is approved.
(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to Subpart DDDDD When using a fuel supplier's fuel analysis, the owner or operator is not required to submit the information in 40 CFR s. 63.7521(g)(2)(iii).

(h) You must obtain a single fuel sample for each fuel type for fuel specification of gaseous fuels.

(i) You must determine the concentration in the fuel of mercury, in units of microgram per cubic meter, dry basis, of each sample for each other gas 1 fuel type according to the procedures in Table 6 to Subpart DDDDD.
[s. 285.65(13), Wis. Stats.; 40 CFR 63.7521; 14-DMM-191]

8. Emissions Averaging

40 CFR 63.7522: Can I use emissions averaging to comply with 40 CFR Part 63, Supbart DDDDD?

(a) As an alternative to meeting the requirements of 40 CFR 63.7500 for PM (or TSM), HCl, or mercury on a boiler or process heater-specific basis, if you have more than one existing boiler or process heater in any subcategories located at your facility, you may demonstrate compliance by emissions averaging, if your averaged emissions are not more than 90 percent of the applicable emission limit, according to the procedures in this section. You may not include new boilers or process heaters in an emissions average.

(b) For a group of two or more existing boilers or process heaters in the same subcategory that each vent to a separate stack, you may average PM (or TSM), HCl, or mercury emissions among existing units to demonstrate compliance with the limits in Table 2 to Subpart DDDDD as specified in paragraph (b)(1) through (3) of this section, if you satisfy the requirements in paragraphs (c) through (g) of this section.
(1) You may average units using a CEMS or PM CPMS for demonstrating compliance.
(2) For mercury and HCl, averaging is allowed as follows:
(i) You may average among units in any of the solid fuel subcategories.
(ii) You may average among units in any of the liquid fuel subcategories.
(iii) You may average among units in a subcategory of units designed to burn gas 2 (other) fuels.
(iv) You may not average across the units designed to burn liquid, units designed to burn solid fuel, and units designed to burn gas 2 (other) subcategories.
(3) For PM (or TSM), averaging is only allowed between units within each of the following subcategories and you may not average across subcategories:
(i) Units designed to burn coal/solid fossil fuel.
(ii) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solids.
(iii) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solids.
(iv) Fluidized bed units designed to burn biomass/bio-based solid.
(v) Suspension burners designed to burn biomass/bio-based solid.
(vi) Dutch ovens/pile burners designed to burn biomass/bio-based solid.
(vii) Fuel Cells designed to burn biomass/bio-based solid.
(viii) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.
(ix) Units designed to burn heavy liquid fuel.
(x) Units designed to burn light liquid fuel.
(xi) Units designed to burn liquid fuel that are non-continental units.
(xii) Units designed to burn gas 2 (other) gases.

(c) For each existing boiler or process heater in the averaging group, the emission rate achieved during the initial compliance test for the HAP being averaged must not exceed the emission level that was being achieved on April 1, 2013 or the control technology employed during the initial compliance test must not be less effective for the HAP being averaged than the control technology employed on April 1, 2013.

(d) The averaged emissions rate from the existing boilers and process heaters participating in the emissions averaging option must not exceed 90 percent of the limits in Table 2 to Subpart DDDDD at all times the affected units are subject to numeric emission

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limits following the compliance date specified in 40 CFR 63.7495.

(e) You must demonstrate initial compliance according to paragraph (e)(1) or (2) of this section using the maximum rated heat input capacity or maximum steam generation capacity of each unit and the results of the initial performance tests or fuel analysis.

(1) You must use Equation 1a or 1b or 1c of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option for that pollutant do not exceed the emission limits in Table 2 to Subpart DDDDD. Use Equation 1a if you are complying with the emission limits on a heat input basis, use Equation 1b if you are complying with the emission limits on a steam generation (output) basis, and use Equation 1c if you are complying with the emission limits on an electric generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Hm) \div \sum_{i=1}^{n} Hm \qquad \text{(Eq. 1a)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to Subpart DDDDD, or by fuel analysis for HCl or mercury or TSM using the applicable equation in 40 CFR 63.7530(c).

Hm = Maximum rated heat input capacity of unit, i, in units of million Btu per hour.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times So) \div \sum_{i=1}^{n} So \qquad \text{(Eq. 1b)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to Subpart DDDDD, or by fuel analysis for HCl or mercury or TSM using the applicable equation in 40 CFR 63.7530(c). If you are taking credit for energy conservation measures from a unit according to 40 CFR 63.7533, use the adjusted emission level for that unit, Eadj, determined according to 40 CFR 63.7533 for that unit.

So = Maximum steam output capacity of unit, i, in units of million Btu per hour, as defined in §63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Eo) \div \sum_{i=1}^{n} Eo \qquad \text{(Eq. 1c)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to Subpart DDDDD, or by fuel analysis for HCl or mercury or TSM using the applicable equation in 40 CFR 63.7530(c). If you are taking credit for energy conservation measures from a unit according to 40 CFR 63.7533, use the adjusted emission level for that unit, Eadj, determined according to 40 CFR 63.7533 for that unit.

Eo = Maximum electric generating output capacity of unit, i, in units of megawatt hour, as defined in 40 CFR 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of determining the maximum rated heat input capacity of one or more boilers that generate steam, you may use Equation 2 of this section as an alternative to using Equation 1a of this section to demonstrate that the PM (or TSM),

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HCl, or mercury emissions from all existing units participating in the emissions averaging option do not exceed the emission limits for that pollutant in Table 2 to Subpart DDDDD that are in pounds per million Btu of heat input.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Sm \times Cfi) \div \sum_{i=1}^{n} Sm \times Cfi \qquad \text{(Eq. 2)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.
Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to Subpart DDDDD, or by fuel analysis for HCl or mercury or TSM using the applicable equation in 40 CFR 63.7530(c).
Sm = Maximum steam generation capacity by unit, i, in units of pounds per hour.
Cfi = Conversion factor, calculated from the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for unit, i.
1.1 = Required discount factor.

(f) After the initial compliance demonstration described in paragraph (e) of this section, you must demonstrate compliance on a monthly basis determined at the end of every month (12 times per year) according to paragraphs (f)(1) through (3) of this section. The first monthly period begins on the compliance date specified in 40 CFR 63.7495. If the affected source elects to collect monthly data for up the 11 months preceding the first monthly period, these additional data points can be used to compute the 12-month rolling average in paragraph (f)(3) of this section.

(1) For each calendar month, you must use Equation 3a or 3b or 3c of this section to calculate the average weighted emission rate for that month. Use Equation 3a and the actual heat input for the month for each existing unit participating in the emissions averaging option if you are complying with emission limits on a heat input basis. Use Equation 3b and the actual steam generation for the month if you are complying with the emission limits on a steam generation (output) basis. Use Equation 3c and the actual electrical generation for the month if you are complying with the emission limits on an electrical generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Hb) \div \sum_{i=1}^{n} Hb \qquad \text{(Eq. 3a)}$$

Where:
AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input, for that calendar month.
Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to Subpart DDDDD, or by fuel analysis for HCl or mercury or TSM according to Table 6 to Subpart DDDDD.
Hb = The heat input for that calendar month to unit, i, in units of million Btu.
n = Number of units participating in the emissions averaging option.
1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times So) \div \sum_{i=1}^{n} So \qquad \text{(Eq. 3b)}$$

Where:
AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output, for that calendar month.
Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to Subpart DDDDD, or by fuel analysis for HCl or mercury or TSM according to Table 6 to Subpart DDDDD. If you are taking credit for energy conservation measures from a unit according to 40 CFR 63.7533, use the adjusted emission level for that unit, Eadj, determined according to 40 CFR

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63.7533 for that unit.
So = The steam output for that calendar month from unit, i, in units of million Btu, as defined in 40 CFR 63.7575.
n = Number of units participating in the emissions averaging option.
1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Eo) \div \sum_{i=1}^{n} Eo \quad \text{(Eq. 3c)}$$

Where:
AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour, for that calendar month.
Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to Subpart DDDDD, or by fuel analysis for HCl or mercury or TSM according to Table 6 to Subpart DDDDD. If you are taking credit for energy conservation measures from a unit according to 40 CFR 63.7533, use the adjusted emission level for that unit, Eadj, determined according to 40 CFR 63.7533 for that unit.
Eo = The electric generating output for that calendar month from unit, i, in units of megawatt hour, as defined in 40 CFR 63.7575.
n = Number of units participating in the emissions averaging option.
1.1 = Required discount factor.

(2) If you are not capable of monitoring heat input, you may use Equation 4 of this section as an alternative to using Equation 3a of this section to calculate the average weighted emission rate using the actual steam generation from the boilers participating in the emissions averaging option.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Sa \times Cfi) \div \sum_{i=1}^{n} Sa \times Cfi \quad \text{(Eq. 4)}$$

Where:
AveWeightedEmissions = average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input for that calendar month.
Er = Emission rate (as determined during the most recent compliance demonstration of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to Subpart DDDDD, or by fuel analysis for HCl or mercury or TSM according to Table 6 to Subpart DDDDD.
Sa = Actual steam generation for that calendar month by boiler, i, in units of pounds.
Cfi = Conversion factor, as calculated during the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for boiler, i.
1.1 = Required discount factor.

(3) Until 12 monthly weighted average emission rates have been accumulated, calculate and report only the average weighted emission rate determined under paragraph (f)(1) or (2) of this section for each calendar month. After 12 monthly weighted average emission rates have been accumulated, for each subsequent calendar month, use Equation 5 of this section to calculate the 12-month rolling average of the monthly weighted average emission rates for the current calendar month and the previous 11 calendar months.

$$Eavg = \sum_{i=1}^{n} ERi \div 12 \quad \text{(Eq. 5)}$$

Where:
Eavg = 12-month rolling average emission rate, (pounds per million Btu heat input)
ERi = Monthly weighted average, for calendar month "i" (pounds per million Btu heat input), as calculated by paragraph (f)(1) or (2) of this section.

(g) You must develop, and submit upon request to the applicable Administrator for review and approval, an implementation plan for emission averaging according to the following procedures and requirements in paragraphs (g)(1) through (4) of this section.

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(1) If requested, you must submit the implementation plan no later than 180 days before the date that the facility intends to demonstrate compliance using the emission averaging option.
(2) You must include the information contained in paragraphs (g)(2)(i) through (vii) of this section in your implementation plan for all emission sources included in an emissions average:
(i) The identification of all existing boilers and process heaters in the averaging group, including for each either the applicable HAP emission level or the control technology installed as of January 31, 2013 and the date on which you are requesting emission averaging to commence;
(ii) The process parameter (heat input or steam generated) that will be monitored for each averaging group;
(iii) The specific control technology or pollution prevention measure to be used for each emission boiler or process heater in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple boilers or process heaters, the owner or operator must identify each boiler or process heater;
(iv) The test plan for the measurement of PM (or TSM), HCl, or mercury emissions in accordance with the requirements in §63.7520;
(v) The operating parameters to be monitored for each control system or device consistent with §63.7500 and Table 4, and a description of how the operating limits will be determined;
(vi) If you request to monitor an alternative operating parameter pursuant to §63.7525, you must also include:
(A) A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); and
(B) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device; the frequency and content of monitoring, reporting, and recordkeeping requirements; and a demonstration, to the satisfaction of the Administrator, that the proposed monitoring frequency is sufficient to represent control device operating conditions; and
(vii) A demonstration that compliance with each of the applicable emission limit(s) will be achieved under representative operating load conditions. Following each compliance demonstration and until the next compliance demonstration, you must comply with the operating limit for operating load conditions specified in Table 4 to Subpart DDDDD.
(3) If submitted upon request, the Administrator shall review and approve or disapprove the plan according to the following criteria:
(i) Whether the content of the plan includes all of the information specified in paragraph (g)(2) of this section; and
(ii) Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.
(4) The applicable Administrator shall not approve an emission averaging implementation plan containing any of the following provisions:
(i) Any averaging between emissions of differing pollutants or between differing sources; or
(ii) The inclusion of any emission source other than an existing unit in the same subcategories.

(h) For a group of two or more existing affected units, each of which vents through a single common stack, you may average PM (or TSM), HCl, or mercury emissions to demonstrate compliance with the limits for that pollutant in Table 2 to Subpart DDDDD if you satisfy the requirements in paragraph (i) or (j) of this section.

(i) For a group of two or more existing units in the same subcategory, each of which vents through a common emissions control system to a common stack, that does not receive emissions from units in other subcategories or categories, you may treat such averaging group as a single existing unit for purposes of Subpart DDDDD and comply with the requirements of Subpart DDDDD as if the group were a single unit.

(j) For all other groups of units subject to the common stack requirements of paragraph (h) of this section, including situations where the exhaust of affected units are each individually controlled and then sent to a common stack, the owner or operator may elect to:
(1) Conduct performance tests according to procedures specified in §63.7520 in the common stack if affected units from other subcategories vent to the common stack. The emission limits that the group must comply with are determined by the use of Equation 6 of this section.

$$En = \sum_{i=1}^{n} (ELi \times Hi) \div \sum_{i=1}^{n} Hi \qquad \text{(Eq. 6)}$$

Where:
En = HAP emission limit, pounds per million British thermal units (lb/MMBtu) or parts per million (ppm).
ELi = Appropriate emission limit from Table 2 to Subpart DDDDD for unit i, in units of lb/MMBtu, ppm or ng/dscm.
Hi = Heat input from unit i, MMBtu.

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(2) Conduct performance tests according to procedures specified in 40 CFR 63.7520 in the common stack. If affected units and non-affected units vent to the common stack, the non-affected units must be shut down or vented to a different stack during the performance test unless the facility determines to demonstrate compliance with the non-affected units venting to the stack; and
(3) Meet the applicable operating limit specified in 40 CFR 63.7540 and Table 8 to Subpart DDDDD for each emissions control system (except that, if each unit venting to the common stack has an applicable opacity operating limit, then a single continuous opacity monitoring system may be located in the common stack instead of in each duct to the common stack).

(k) The common stack of a group of two or more existing boilers or process heaters in the same subcategories subject to paragraph (h) of this section may be treated as a separate stack for purposes of paragraph (b) of this section and included in an emissions averaging group subject to paragraph (b) of this section.
[s. 285.65(13), Wis. Stats.; 40 CFR 63.7522; 14-DMM-191]

9. Monitoring, Installation, Operation, and Maintenance Requirements

40 CFR 63.7525: What are my monitoring, installation, operation, and maintenance requirements?

(a) If your boiler or process heater is subject to a CO emission limit in Tables 1, 2, or 11 through 13 to Subpart DDDDD, you must install, operate, and maintain an oxygen analyzer system, as defined in 40 CFR 63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen (or carbon dioxide (CO_2)) according to the procedures in paragraphs (a)(1) through (6) of this section.
(1) Install the CO CEMS and oxygen (or CO_2) analyzer by the compliance date specified in 40 CFR 63.7495. The CO and oxygen (or CO_2) levels shall be monitored at the same location at the outlet of the boiler or process heater. An owner or operator may request an alternative test method under s. 63.7 of this chapter, in order that compliance with the CO emissions limit be determined using CO_2 as a diluent correction in place of oxygen at 3 percent. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3 percent oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.
(2) To demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to Subpart DDDDD, you must install, certify, operate, and maintain a CO CEMS and an oxygen analyzer according to the applicable procedures under Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B; Part 75 of this chapter (if a CO_2 analyzer is used); the site-specific monitoring plan developed according to 40 CFR 63.7505(d), and the requirements in 40 CFR 63.7540(a)(8) and paragraph (a) of this section. Any boiler or process heater that has a CO CEMS that is compliant with Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, a site-specific monitoring plan developed according to 40 CFR 63.7505(d); and the requirements in 40 CFR 63.7540(a)(8) and paragraph (a) of this section must use the CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to Subpart DDDDD.
(i) You must conduct a performance evaluation of each CO CEMS according to the requirements in 40 CFR 63.8(e) and according to Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B.
(ii) During each relative accuracy test run of the CO CEMS, you must collect emission data for CO concurrently (or within a 30- to 60-minute period) by both the CO CEMS and by Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4. The relative accuracy testing must be at representative operating conditions.
(iii) You must follow the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of Procedure 1 of appendix F to part 60. The measurement span value of the CO CEMS must be two times the applicable CO emission limit, expressed as a concentration.
(iv) Any CO CEMS that does not comply with 40 CFR 63.7525(a) cannot be used to meet any requirement in Subpart DDDDD to demonstrate compliance with a CO emission limit listed in Tables 1, 2, or 11 through 13 to Subpart DDDDD.
(v) For an existing unit, complete the initial performance evaluation no later than July 29, 2017. [40 CFR s. 63.6(i)]
(vi) When CO_2 is used to correct CO emissions and CO_2 is measured on a wet basis, correct for moisture as follows: Install, operate, maintain, and quality assure a continuous moisture monitoring system for measuring and recording the moisture content of the flue gases, in order to correct the measured hourly volumetric flow rates for moisture when calculating CO concentrations. The following continuous moisture monitoring systems are acceptable: A continuous moisture sensor; an oxygen analyzer (or analyzers) capable of measuring O_2 both on a wet basis and on a dry basis; or a stack temperature sensor and a moisture look-up table, *i.e.*, a psychrometric chart (for saturated gas streams following wet scrubbers or other demonstrably saturated gas streams, only). The moisture monitoring system shall include as a component the automated data acquisition and handling system (DAHS) for recording and reporting both the raw data (*e.g.*, hourly average wet-and dry basis

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O_2 values) and the hourly average values of the stack gas moisture content derived from those data. When a moisture look-up table is used, the moisture monitoring system shall be represented as a single component, the certified DAHS, in the monitoring plan for the unit or common stack.

(3) Complete a minimum of one cycle of CO and oxygen (or CO_2) CEMS operation (sampling, analyzing, and data recording) for each successive 15-minute period. Collect CO and oxygen (or CO_2) data concurrently. Collect at least four CO and oxygen (or CO_2) CEMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CEMS calibration, quality assurance, or maintenance activities are being performed.

(4) Reduce the CO CEMS data as specified in 40 CFR 63.8(g)(2).

(5) Calculate one-hour arithmetic averages, corrected to 3 percent oxygen (or corrected to a CO_2 percentage determined to be equivalent to 3 percent oxygen) from each hour of CO CEMS data in parts per million CO concentration. The one-hour arithmetic averages required shall be used to calculate the 30-day or 10-day rolling average emissions. Use Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7 for calculating the average CO concentration from the hourly values.

(6) For purposes of collecting CO data, operate the CO CEMS as specified in 40 CFR 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in 40 CFR 63.7535(c). Periods when CO data are unavailable may constitute monitoring deviations as specified in 40 CFR 63.7535(d).

(7) Operate an oxygen trim system with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test as the operating limit for oxygen according to Table 7 to Subpart DDDDD.

(b) If your boiler or process heater is in the unit designed to burn coal/solid fossil fuel subcategory or the unit designed to burn heavy liquid subcategory and has an average annual heat input rate greater than 250 MMBtu per hour from solid fossil fuel and/or heavy liquid, and you demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (b)(1) through (4) of this section. As an alternative to use of a PM CPMS to demonstrate compliance with the PM limit, you may choose to use a PM CEMS. If you choose to use a PM CEMS to demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CEMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraph (b)(5) through (8) of this section. For other boilers or process heaters, you may elect to use a PM CPMS or PM CEMS operated in accordance with this section in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure). Owners of boilers and process heaters who elect to comply with the alternative TSM limit are not required to install a PM CPMS.

(1) Install, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with §63.7505(d), the requirements in §63.7540(a)(9), and paragraphs (b)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of PM in the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS must be expressed as milliamps.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must have a documented detection limit of 0.5 milligram per actual cubic meter, or less.

(2) For an existing unit, complete the initial performance evaluation no later than July 29, 2017. [40 CFR 63.6(i)]

(3) Collect PM CPMS hourly average output data for all boiler or process heater operating hours except as indicated in §63.7535(a) through (d). Express the PM CPMS output as milliamps.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output data collected during all boiler or process heater operating hours (milliamps).

(5) Install, certify, operate, and maintain your PM CEMS according to the procedures in your approved site-specific monitoring plan developed in accordance with §63.7505(d), the requirements in §63.7540(a)(9), and paragraphs (b)(5)(i) through (iv) of this section.

(i) You shall conduct a performance evaluation of the PM CEMS according to the applicable requirements of 40 CFR 60.8(e), and Performance Specification 11 at 40 CFR part 60, appendix B of this chapter.

(ii) During each PM correlation testing run of the CEMS required by Performance Specification 11 at 40 CFR part 60, appendix B of this chapter, you shall collect PM and oxygen (or carbon dioxide) data concurrently (or within a 30-to 60-minute period) by both the CEMS and conducting performance tests using Method 5 at 40 CFR part 60, appendix A-3 or Method 17 at 40 CFR part 60, appendix A-6 of this chapter.

(iii) You shall perform quarterly accuracy determinations and daily calibration drift tests in accordance with Procedure 2 at 40 CFR part 60, appendix F of this chapter. You must perform Relative Response Audits annually and perform Response

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Correlation Audits every 3 years.

(iv) Within 60 days after the date of completing each CEMS relative accuracy test audit or performance test conducted to demonstrate compliance with Subpart DDDDD, you must submit the relative accuracy test audit data and performance test data to the EPA by successfully submitting the data electronically into the EPA's Central Data Exchange by using the Electronic Reporting Tool (see http://www.epa.gov/ttn/chief/ert/erttool.html/).

(6) For an existing unit, complete the initial performance evaluation no later than July 29, 2017. [40 CFR 63.6(i)]

(7) Collect PM CEMS hourly average output data for all boiler or process heater operating hours except as indicated in 40 CFR 63.7535(a) through (d).

(8) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all boiler or process heater operating hours.

(c) If you have an applicable opacity operating limit in this rule, and are not otherwise required or elect to install and operate a PM CPMS, PM CEMS, or a bag leak detection system, you must install, operate, certify and maintain each COMS according to the procedures in paragraphs (c)(1) through (7) of this section by the compliance date specified in 40 CFR 63.7495.

(1) Each COMS must be installed, operated, and maintained according to Performance Specification 1 at appendix B to part 60 of this chapter.

(2) You must conduct a performance evaluation of each COMS according to the requirements in 40 CFR 63.8(e) and according to Performance Specification 1 at appendix B to part 60 of this chapter.

(3) As specified in 40 CFR 63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in 40 CFR 63.8(g)(2).

(5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in 40 CFR 63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of 40 CFR 63.8(e). You must identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit. Any 6-minute period for which the monitoring system is out of control and data are not available for a required calculation constitutes a deviation from the monitoring requirements.

(7) You must determine and record all the 6-minute averages (and daily block averages as applicable) collected for periods during which the COMS is not out of control.

(d) If you have an operating limit that requires the use of a CMS other than a PM CPMS or COMS, you must install, operate, and maintain each CMS according to the procedures in paragraphs (d)(1) through (5) of this section by the compliance date specified in 40 CFR 63.7495.

(1) The CPMS must complete a minimum of one cycle of operation every 15-minutes. You must have a minimum of four successive cycles of operation, one representing each of the four 15-minute periods in an hour, to have a valid hour of data.

(2) You must operate the monitoring system as specified in 40 CFR 63.7535(b), and comply with the data calculation requirements specified in 40 CFR 63.7535(c).

(3) Any 15-minute period for which the monitoring system is out-of-control and data are not available for a required calculation constitutes a deviation from the monitoring requirements. Other situations that constitute a monitoring deviation are specified in 40 CFR 63.7535(d).

(4) You must determine the 30-day rolling average of all recorded readings, except as provided in 40 CFR 63.7535(c).

(5) You must record the results of each inspection, calibration, and validation check.

(e) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (d) and (e)(1) through (4) of this section.

(1) You must install the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) You must use a flow sensor with a measurement sensitivity of no greater than 2 percent of the design flow rate.

(3) You must minimize, consistent with good engineering practices, the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) You must conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(f) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in

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paragraphs (d) and (f)(1) through (6) of this section.
(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop).
(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion consistent with good engineering practices.
(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.
(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (e.g., check for pressure tap pluggage daily).
(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.
(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in you monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(g) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (d) and (g)(1) through (4) of this section.
(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.
(2) Ensure the sample is properly mixed and representative of the fluid to be measured.
(3) Calibrate the pH monitoring system in accordance with your monitoring plan and according to the manufacturer's instructions. Clean the pH probe at least once each process operating day. Maintain on-site documentation that your calibration frequency is sufficient to maintain the specified accuracy of your device.
(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(h) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator (ESP) operated with a wet scrubber, you must meet the requirements in paragraphs (h)(1) and (2) of this section.
(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates.
(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(i) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (d) and (i)(1) through (2) of this section.
(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.
(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(j) If you are not required to use a PM CPMS and elect to use a fabric filter bag leak detection system to comply with the requirements of Subpart DDDDD, you must install, calibrate, maintain, and continuously operate the bag leak detection system as specified in paragraphs (j)(1) through (6) of this section.
(1) You must install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute PM loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.
(2) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see 40 CFR 63.14).
(3) Use a bag leak detection system certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter or less.
(4) Use a bag leak detection system equipped with a device to record continuously the output signal from the sensor.
(5) Use a bag leak detection system equipped with a system that will alert plant operating personnel when an increase in relative PM emissions over a preset level is detected. The alert must easily recognizable (e.g., heard or seen) by plant operating personnel.
(6) Where multiple bag leak detectors are required, the system's instrumentation and alert may be shared among detectors.

(k) For each unit that meets the definition of limited-use boiler or process heater, you must keep fuel use records for the days the

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boiler or process heater was operating.

(l) For each unit for which you decide to demonstrate compliance with the mercury or HCl emissions limits in Tables 1 or 2 or 11 through 13 of Subpart DDDDD by use of a CEMS for mercury or HCl, you must install, certify, maintain, and operate a CEMS measuring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (l)(1) through (8) of this section. For HCl, this option for an affected unit takes effect on the date a final performance specification for a HCl CEMS is published in the Federal Register or the date of approval of a site-specific monitoring plan.

(1) Notify the Administrator one month before starting use of the CEMS, and notify the Administrator one month before stopping use of the CEMS.

(2) Each CEMS shall be installed, certified, operated, and maintained according to the requirements in 40 CFR 63.7540(a)(14) for a mercury CEMS and 40 CFR 63.7540(a)(15) for a HCl CEMS.

(4) For an existing unit, you must complete the initial performance evaluation by the latter of the two dates specified in paragraph (l)(4)(i) and (ii) of this section.

(i) No later than July 29, 2017. [40 CFR 63.6(i)]

(ii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(5) Compliance with the applicable emissions limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emissions rates using the continuous monitoring system outlet data. The 30-day rolling arithmetic average emission rate (lb/MMBtu) shall be calculated using the equations in EPA Reference Method 19 at 40 CFR part 60, appendix A-7, but substituting the mercury or HCl concentration for the pollutant concentrations normally used in Method 19.

(6) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis. Collect at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

(7) The one-hour arithmetic averages required shall be expressed in lb/MMBtu and shall be used to calculate the boiler 30-day and 10-day rolling average emissions.

(8) You are allowed to substitute the use of the PM, mercury or HCl CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to Subpart DDDDD to demonstrate compliance with the PM, mercury or HCl emissions limit, and if you are using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, you are allowed to substitute the use of a sulfur dioxide (SO2) CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to Subpart DDDDD to demonstrate compliance with HCl emissions limit.

(m) If your unit is subject to a HCl emission limit in Tables 1, 2, or 11 through 13 of Subpart DDDDD and you have an acid gas wet scrubber or dry sorbent injection control technology and you elect to use an SO_2 CEMS to demonstrate continuous compliance with the HCl emission limit, you must install the monitor at the outlet of the boiler or process heater, downstream of all emission control devices, and you must install, certify, operate, and maintain the CEMS according to either part 60 or part 75 of this chapter.

(1) The SO2 CEMS must be installed by the compliance date specified in 40 CFR 63.7495.

(2) For on-going quality assurance (QA), the SO2 CEMS must meet either the applicable daily and quarterly requirements in Procedure 1 of appendix F of part 60 or the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: You must perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the SO2 CEMS has a span value of 30 ppm or less.

(3) For an existing unit, the initial performance evaluation shall be completed no later than July 29, 2017. [40 CFR 63.6(i)]

(4) For purposes of collecting SO2 data, you must operate the SO2 CEMS as specified in 40 CFR 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in 40 CFR 63.7535(c). Periods when SO2 data are unavailable may constitute monitoring deviations as specified in 40 CFR 63.7535(d).

(5) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis.

(6) Use only unadjusted, quality-assured SO2 concentration values in the emissions calculations; do not apply bias adjustment factors to the part 75 SO2 data and do not use part 75 substitute data values.

[s. 285.65(13), Wis. Stats.; 40 CFR 63.6(i) and 63.7525; 14-DMM-191]

10. Initial Compliance

<u>40 CFR 63.7530: How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?</u>

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(a) You must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests and fuel analyses and establishing operating limits, as applicable, according to 40 CFR 63.7520, paragraphs (b) and (c) of this section, and Tables 5 and 7 to Subpart DDDDD. The requirement to conduct a fuel analysis is not applicable for units that burn a single type of fuel, as specified by 40 CFR 63.7510(a)(2). If applicable, you must also install, operate, and maintain all applicable CMS (including CEMS, COMS, and CPMS) according to 40 CFR 63.7525.

(b) If you demonstrate compliance through performance stack testing, you must establish each site-specific operating limit in Table 4 to Subpart DDDDD that applies to you according to the requirements in 40 CFR 63.7520, Table 7 to Subpart DDDDD, and paragraph (b)(4) of this section, as applicable. You must also conduct fuel analyses according to 40 CFR 63.7521 and establish maximum fuel pollutant input levels according to paragraphs (b)(1) through (3) of this section, as applicable, and as specified in 40 CFR 63.7510(a)(2). (Note that 40 CFR 63.7510(a)(2) exempts certain fuels from the fuel analysis requirements.) However, if you switch fuel(s) and cannot show that the new fuel(s) does (do) not increase the chlorine, mercury, or TSM input into the unit through the results of fuel analysis, then you must repeat the performance test to demonstrate compliance while burning the new fuel(s).

(1) You must establish the maximum chlorine fuel input (Clinput) during the initial fuel analysis according to the procedures in paragraphs (b)(1)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of chlorine.

(ii) During the fuel analysis for hydrogen chloride, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of chlorine, and the average chlorine concentration of each fuel type burned (Ci).

(iii) You must establish a maximum chlorine input level using Equation 7 of this section.

$$Clinput = \sum_{i=1}^{n} (Ci \times Qi) \qquad \text{(Eq. 7)}$$

Where:

Clinput = Maximum amount of chlorine entering the boiler or process heater through fuels burned in units of pounds per million Btu.

Ci = Arithmetic average concentration of chlorine in fuel type, i, analyzed according to 40 CFR 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

(2) You must establish the maximum mercury fuel input level (Mercuryinput) during the initial fuel analysis using the procedures in paragraphs (b)(2)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of mercury.

(ii) During the compliance demonstration for mercury, you must determine the fraction of total heat input for each fuel burned (Qi) based on the fuel mixture that has the highest content of mercury, and the average mercury concentration of each fuel type burned (HGi).

(iii) You must establish a maximum mercury input level using Equation 8 of this section.

$$Mercuryinput = \sum_{i=1}^{n} (HGi \times Qi) \qquad \text{(Eq. 8)}$$

Where:

Mercuryinput = Maximum amount of mercury entering the boiler or process heater through fuels burned in units of pounds per million Btu.

HGi = Arithmetic average concentration of mercury in fuel type, i, analyzed according to 40 CFR 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content during the initial compliance test. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel

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burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of mercury.

(3) If you opt to comply with the alternative TSM limit, you must establish the maximum TSM fuel input (TSMinput) for solid or liquid fuels during the initial fuel analysis according to the procedures in paragraphs (b)(3)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of TSM.

(ii) During the fuel analysis for TSM, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of TSM, and the average TSM concentration of each fuel type burned (TSMi).

(iii) You must establish a maximum TSM input level using Equation 9 of this section.

$$TSMinput = \sum_{i=1}^{n} (TSMi \times Qi) \qquad \text{(Eq. 9)}$$

Where:

TSMinput = Maximum amount of TSM entering the boiler or process heater through fuels burned in units of pounds per million Btu.

TSMi = Arithmetic average concentration of TSM in fuel type, i, analyzed according to 40 CFR 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of TSM during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(4) You must establish parameter operating limits according to paragraphs (b)(4)(i) through (ix) of this section. As indicated in Table 4 to Subpart DDDDD, you are not required to establish and comply with the operating parameter limits when you are using a CEMS to monitor and demonstrate compliance with the applicable emission limit for that control device parameter.

(i) For a wet acid gas scrubber, you must establish the minimum scrubber effluent pH and liquid flow rate as defined in 40 CFR 63.7575, as your operating limits during the performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for HCl and mercury emissions, you must establish one set of minimum scrubber effluent pH, liquid flow rate, and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate operating limit at the higher of the minimum values established during the performance tests.

(ii) For any particulate control device (e.g., ESP, particulate wet scrubber, fabric filter) for which you use a PM CPMS, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (b)(4)(ii)(A) through (F) of this section.

(A) Determine your operating limit as the average PM CPMS output value recorded during the most recent performance test run demonstrating compliance with the filterable PM emission limit or at the PM CPMS output value corresponding to 75 percent of the emission limit if your PM performance test demonstrates compliance below 75 percent of the emission limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(1) Your PM CPMS must provide a 4-20 milliamp output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps.

(2) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit.

(3) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

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(B) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in paragraphs (b)(4)(ii)(B)(1) through (4) of this section.

(1) Determine your instrument zero output with one of the following procedures:

(i) Zero point data for in-situ instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

(ii) Zero point data for extractive instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

(iii) The zero point may also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

(iv) If none of the steps in paragraphs (b)(4)(ii)(B)(1)(i) through (iii) of this section are possible, you must use a zero output value provided by the manufacturer.

(2) Determine your PM CPMS instrument average in milliamps, and the average of your corresponding three PM compliance test runs, using equation 10.

$$\overline{x} = \frac{1}{n}\sum_{i=1}^{n} X_1, \overline{y} = \frac{1}{n}\sum_{i=1}^{n} Y_1 \qquad \text{(Eq. 10)}$$

Where:
X_1 = the PM CPMS data points for the three runs constituting the performance test,
Y_1 = the PM concentration value for the three runs constituting the performance test, and
n = the number of data points.

(3) With your instrument zero expressed in milliamps, your three run average PM CPMS milliamp value, and your three run average PM concentration from your three compliance tests, determine a relationship of lb/MMBtu per milliamp with equation 11.

$$\mathrm{R} = \frac{Y_1}{(X_1 - z)} \qquad \text{(Eq. 11)}$$

Where:
R = the relative lb/MMBtu per milliamp for your PM CPMS,
Y_1 = the three run average lb/MMBtu PM concentration,
X_1 = the three run average milliamp output from you PM CPMS, and
z = the milliamp equivalent of your instrument zero determined from (B)(i).

(4) Determine your source specific 30-day rolling average operating limit using the lb/MMBtu per milliamp value from Equation 11 in equation 12, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit.

$$O_l = z + \frac{0.75(L)}{R} \qquad \text{(Eq. 12)}$$

Where:
O_l = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps.
L = your source emission limit expressed in lb/MMBtu,
z = your instrument zero in milliamps, determined from (B)(i), and
R = the relative lb/MMBtu per milliamp for your PM CPMS, from Equation 11.

(C) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your 30-day rolling average operating limit by averaging the PM CPMS milliamp output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 13 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (b)(4)(ii)(F) of this

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section.

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_1 \qquad \text{(Eq. 13)}$$

Where:
X_1 = the PM CPMS data points for all runs i,
n = the number of data points, and
O_h = your site specific operating limit, in milliamps.

(D) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new operating hour. Use Equation 14 to determine the 30-day rolling average.

$$30\text{-day} = \frac{\sum_{i=1}^{n} Hpv_i}{n} \qquad \text{(Eq. 14)}$$

Where:
30-day = 30-day average.
Hpv_i = is the hourly parameter value for hour i
n = is the number of valid hourly parameter values collected over the previous 30 operating days.

(E) Use EPA Method 5 of appendix A to part 60 of this chapter to determine PM emissions. For each performance test, conduct three separate runs under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. Conduct each test run to collect a minimum sample volume specified in Tables 1, 2, or 11 through 13 to Subpart DDDDD, as applicable, for determining compliance with a new source limit or an existing source limit. Calculate the average of the results from three runs to determine compliance. You need not determine the PM collected in the impingers ("back half") of the Method 5 particulate sampling train to demonstrate compliance with the PM standards of Subpart DDDDD. This shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes.

(F) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run.

(iii) For a particulate wet scrubber, you must establish the minimum pressure drop and liquid flow rate as defined in §63.7575, as your operating limits during the three-run performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for PM and TSM emissions, you must establish one set of minimum scrubber liquid flow rate and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests.

(iv) For an electrostatic precipitator (ESP) operated with a wet scrubber, you must establish the minimum total secondary electric power input, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit. (These operating limits do not apply to ESP that are operated as dry controls without a wet scrubber.)

(v) For a dry scrubber, you must establish the minimum sorbent injection rate for each sorbent, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vi) For activated carbon injection, you must establish the minimum activated carbon injection rate, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vii) The operating limit for boilers or process heaters with fabric filters that demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in §63.7525, and that

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each fabric filter must be operated such that the bag leak detection system alert is not activated more than 5 percent of the operating time during a 6-month period.
(viii) For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests.
(ix) The operating limit for boilers or process heaters that demonstrate continuous compliance with the HCl emission limit using a SO2 CEMS is to install and operate the SO2 according to the requirements in §63.7525(m) establish a maximum SO2 emission rate equal to the highest hourly average SO2 measurement during the most recent three-run performance test for HCl.

(c) If you elect to demonstrate compliance with an applicable emission limit through fuel analysis, you must conduct fuel analyses according to 40 CFR s. 63.7521 and follow the procedures in paragraphs (c)(1) through (5) of this section.
(1) If you burn more than one fuel type, you must determine the fuel mixture you could burn in your boiler or process heater that would result in the maximum emission rates of the pollutants that you elect to demonstrate compliance through fuel analysis.
(2) You must determine the 90th percentile confidence level fuel pollutant concentration of the composite samples analyzed for each fuel type using the one-sided t-statistic test described in Equation 15 of this section.

$$P90 = mean + (SD \times t) \qquad \text{(Eq. 15)}$$

Where:

P90 = 90th percentile confidence level pollutant concentration, in pounds per million Btu.

Mean = Arithmetic average of the fuel pollutant concentration in the fuel samples analyzed according to §63.7521, in units of pounds per million Btu.
SD = Standard deviation of the mean of pollutant concentration in the fuel samples analyzed according to §63.7521, in units of pounds per million Btu. SD is calculated as the sample standard deviation divided by the square root of the number of samples.
t = t distribution critical value for 90th percentile ($t_{0.1}$) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a t-Distribution Critical Value Table.
(3) To demonstrate compliance with the applicable emission limit for HCl, the HCl emission rate that you calculate for your boiler or process heater using Equation 16 of this section must not exceed the applicable emission limit for HCl.

$$HCl = \sum_{i=1}^{n} (Ci90 \times Qi \times 1.028) \qquad \text{(Eq. 16)}$$

Where:

HCl = HCl emission rate from the boiler or process heater in units of pounds per million Btu.
Ci90 = 90th percentile confidence level concentration of chlorine in fuel type, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.
Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.
n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.
1.028 = Molecular weight ratio of HCl to chlorine.

(4) To demonstrate compliance with the applicable emission limit for mercury, the mercury emission rate that you calculate for your boiler or process heater using Equation 17 of this section must not exceed the applicable emission limit for mercury.

$$Mercury = \sum_{i=1}^{n} (Hgi90 \times Qi) \qquad \text{(Eq. 17)}$$

Where:
Mercury = Mercury emission rate from the boiler or process heater in units of pounds per million Btu.
Hgi90 = 90th percentile confidence level concentration of mercury in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.
Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous

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compliance demonstration, the actual fraction of the fuel burned during the month should be used.
n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest mercury content.

(5) To demonstrate compliance with the applicable emission limit for TSM for solid or liquid fuels, the TSM emission rate that you calculate for your boiler or process heater from solid fuels using Equation 18 of this section must not exceed the applicable emission limit for TSM.

$$Metals = \sum_{i=1}^{n} (TSMi90 \times Qi) \qquad \text{(Eq. 18)}$$

Where:
Metals = TSM emission rate from the boiler or process heater in units of pounds per million Btu.
TSMi90 = 90th percentile confidence level concentration of TSM in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.
Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest TSM content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.
n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest TSM content.

(d) Reserved.

(e) You must include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 to Subpart DDDDD, and that the assessment is an accurate depiction of your facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.

(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.7545(e).

(g) If you elect to demonstrate that a gaseous fuel meets the specifications of another gas 1 fuel as defined in §63.7575, you must conduct an initial fuel specification analyses according to §63.7521(f) through (i) and according to the frequency listed in §63.7540(c) and maintain records of the results of the testing as outlined in §63.7555(g). For samples where the initial mercury specification has not been exceeded, you will include a signed certification with the Notification of Compliance Status that the initial fuel specification test meets the gas specification outlined in the definition of other gas 1 fuels.

(h) If you own or operate a unit subject to emission limits in Tables 1 or 2 or 11 through 13 to Subpart DDDDD, you must meet the work practice standard according to Table 3 of Subpart DDDDD. During startup and shutdown, you must only follow the work practice standards according to items 5 and 6 of Table 3 of Subpart DDDDD.

(i) If you opt to comply with the alternative SO_2 CEMS operating limit in Tables 4 and 8 to Subpart DDDDD, you may do so only if your affected boiler or process heater:
(1) Has a system using wet scrubber or dry sorbent injection and SO_2 CEMS installed on the unit; and
(2) At all times, you operate the wet scrubber or dry sorbent injection for acid gas control on the unit consistent with §63.7500(a)(3); and
(3) You establish a unit-specific maximum SO_2 operating limit by collecting the maximum hourly SO_2 emission rate on the SO_2 CEMS during the paired 3-run test for HCl. The maximum SO_2 operating limit is equal to the highest hourly average SO_2 concentration measured during the HCl performance test.
[s. 285.65(13), Wis. Stats.; 40 CFR 63.7530; 14-DMM-191]

11. Efficiency Credits

40 CFR 63.7533: Can I use efficiency credits earned from implementation of energy conservation measures to comply with 40 CFR Part 63, Subpart DDDDD?

(a) If you elect to comply with the alternative equivalent output-based emission limits, instead of the heat input-based limits listed in Table 2 to Subpart DDDDD, and you want to take credit for implementing energy conservation measures identified in an energy assessment, you may demonstrate compliance using efficiency credits according to the procedures in this section. You may use this

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compliance approach for an existing affected boiler for demonstrating initial compliance according to §63.7522(e) and for demonstrating monthly compliance according to §63.7522(f). Owners or operators using this compliance approach must establish an emissions benchmark, calculate and document the efficiency credits, develop an Implementation Plan, comply with the general reporting requirements, and apply the efficiency credit according to the procedures in paragraphs (b) through (f) of this section. You cannot use this compliance approach for a new or reconstructed affected boiler. Additional guidance from the Department of Energy on efficiency credits is available at: http://www.epa.gov/ttn/atw/boiler/boilerpg.html.

(b) For each existing affected boiler for which you intend to apply emissions credits, establish a benchmark from which emission reduction credits may be generated by determining the actual annual fuel heat input to the affected boiler before initiation of an energy conservation activity to reduce energy demand (i.e., fuel usage) according to paragraphs (b)(1) through (4) of this section. The benchmark shall be expressed in trillion Btu per year heat input.

(1) The benchmark from which efficiency credits may be generated shall be determined by using the most representative, accurate, and reliable process available for the source. The benchmark shall be established for a one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

(2) Determine the starting point from which to measure progress. Inventory all fuel purchased and generated on-site (off-gases, residues) in physical units (MMBtu, million cubic feet, etc.).

(3) Document all uses of energy from the affected boiler. Use the most recent data available.

(4) Collect non-energy related facility and operational data to normalize, if necessary, the benchmark to current operations, such as building size, operating hours, etc. If possible, use actual data that are current and timely rather than estimated data.

(c) Efficiency credits can be generated if the energy conservation measures were implemented after January 1, 2008 and if sufficient information is available to determine the appropriate value of credits.

(1) The following emission points cannot be used to generate efficiency credits:

(i) Energy conservation measures implemented on or before January 1, 2008, unless the level of energy demand reduction is increased after January 1, 2008, in which case credit will be allowed only for change in demand reduction achieved after January 1, 2008.

(ii) Efficiency credits on shut-down boilers. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to energy conservation measures identified in the energy assessment. In this case, the bench established for the affected boiler to which the credits from the shutdown will be applied must be revised to include the benchmark established for the shutdown boiler.

(2) For all points included in calculating emissions credits, the owner or operator shall:

(i) Calculate annual credits for all energy demand points. Use Equation 19 to calculate credits. Energy conservation measures that meet the criteria of paragraph (c)(1) of this section shall not be included, except as specified in paragraph (c)(1)(i) of this section.

(3) Credits are generated by the difference between the benchmark that is established for each affected boiler, and the actual energy demand reductions from energy conservation measures implemented after January 1, 2008. Credits shall be calculated using Equation 19 of this section as follows:

(i) The overall equation for calculating credits is:

$$ECredits = \left(\sum_{i=1}^{n} EIS_{iactual} \right) \div EI_{baseline} \qquad \text{(Eq. 19)}$$

Where:

ECredits = Energy Input Savings for all energy conservation measures implemented for an affected boiler, expressed as a decimal fraction of the baseline energy input.

$EIS_{iactual}$ = Energy Input Savings for each energy conservation measure, i, implemented for an affected boiler, million Btu per year.

$EI_{baseline}$ = Energy Input baseline for the affected boiler, million Btu per year.

n = Number of energy conservation measures included in the efficiency credit for the affected boiler.

(ii)[Reserved]

(d) The owner or operator shall develop, and submit for approval upon request by the Administrator, an Implementation Plan containing all of the information required in this paragraph for all boilers to be included in an efficiency credit approach. The

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Implementation Plan shall identify all existing affected boilers to be included in applying the efficiency credits. The Implementation Plan shall include a description of the energy conservation measures implemented and the energy savings generated from each measure and an explanation of the criteria used for determining that savings. If requested, you must submit the implementation plan for efficiency credits to the Administrator for review and approval no later than 180 days before the date on which the facility intends to demonstrate compliance using the efficiency credit approach.

(e) The emissions rate as calculated using Equation 20 of this section from each existing boiler participating in the efficiency credit option must be in compliance with the limits in Table 2 to Subpart DDDDD at all times the affected unit is subject to numeric emission limits, following the compliance date specified in 40 CFR s. 63.7495.

(f) You must use Equation 20 of this section to demonstrate initial compliance by demonstrating that the emissions from the affected boiler participating in the efficiency credit compliance approach do not exceed the emission limits in Table 2 to Subpart DDDDD.

$$E_{adj} = E_m \times (1 - ECredits) \quad \text{(Eq. 20)}$$

Where:
E_{adj} = Emission level adjusted by applying the efficiency credits earned, lb per million Btu steam output (or lb per MWh) for the affected boiler.
E_m = Emissions measured during the performance test, lb per million Btu steam output (or lb per MWh) for the affected boiler.
ECredits = Efficiency credits from Equation 19 for the affected boiler.

(g) As part of each compliance report submitted as required under §63.7550, you must include documentation that the energy conservation measures implemented continue to generate the credit for use in demonstrating compliance with the emission limits. [s. 285.65(13), Wis. Stats.; 40 CFR 63.7533; 14-DMM-191]

12. Minimum Monitoring Data

40 CFR 63.7535: Is there a minimum amount of monitoring data I must obtain?

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by §63.7505(d).

(b) You must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods (see §63.8(c)(7) of this part), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(c) You may not use data recorded during periods of startup and shutdown, monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system.

(d) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods of startup and shutdown, when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the

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monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your semi-annual report.
[s. 285.65(13), Wis. Stats.; 40 CFR 63.7535; 14-DMM-191]

13. Continuous Compliance

40 CFR 63.7540: How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 13 to Subpart DDDDD, the work practice standards in Table 3 to Subpart DDDDD, and the operating limits in Table 4 to Subpart DDDDD that applies to you according to the methods specified in Table 8 to Subpart DDDDD and paragraphs (a)(1) through (19) of this section.

(1) Following the date on which the initial compliance demonstration is completed or is required to be completed under §§63.7 and 63.7510, whichever date comes first, operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits listed in Table 4 of Subpart DDDDD except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests.

(2) As specified in 40 CFR s. 63.7555(d), you must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in either of the following:

(i) Lower emissions of HCl, mercury, and TSM than the applicable emission limit for each pollutant, if you demonstrate compliance through fuel analysis.

(ii) Lower fuel input of chlorine, mercury, and TSM than the maximum values calculated during the last performance test, if you demonstrate compliance through performance testing.

(3) If you demonstrate compliance with an applicable HCl emission limit through fuel analysis for a solid or liquid fuel and you plan to burn a new type of solid or liquid fuel, you must recalculate the HCl emission rate using Equation 16 of 40 CFR s. 63.7530 according to paragraphs (a)(3)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in 40 CFR ss. 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in 40 CFR ss. 63.7510(a)(2)(i) through (iii) when recalculating the HCl emission rate.

(i) You must determine the chlorine concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of chlorine.

(iii) Recalculate the HCl emission rate from your boiler or process heater under these new conditions using Equation 16 of 40 CFR s. 63.7530. The recalculated HCl emission rate must be less than the applicable emission limit.

(4) If you demonstrate compliance with an applicable HCl emission limit through performance testing and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum chlorine input using Equation 7 of §63.7530. If the results of recalculating the maximum chlorine input using Equation 7 of §63.7530 are greater than the maximum chlorine input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the HCl emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(b). In recalculating the maximum chlorine input and establishing the new operating limits, you are not required to conduct fuel analyses for and include the fuels described in §63.7510(a)(2)(i) through (iii).

(5) If you demonstrate compliance with an applicable mercury emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the mercury emission rate using Equation 17 of 40 CFR s. 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(i) You must determine the mercury concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of mercury.

(iii) Recalculate the mercury emission rate from your boiler or process heater under these new conditions using Equation 17 of 40 CFR s. 63.7530. The recalculated mercury emission rate must be less than the applicable emission limit.

(6) If you demonstrate compliance with an applicable mercury emission limit through performance testing, and you plan to burn a

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new type of fuel or a new mixture of fuels, you must recalculate the maximum mercury input using Equation 8 of §63.7530. If the results of recalculating the maximum mercury input using Equation 8 of §63.7530 are higher than the maximum mercury input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the mercury emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(b). You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(7) If your unit is controlled with a fabric filter, and you demonstrate continuous compliance using a bag leak detection system, you must initiate corrective action within 1 hour of a bag leak detection system alert and complete corrective actions as soon as practical, and operate and maintain the fabric filter system such that the periods which would cause an alert are no more than 5 percent of the operating time during a 6-month period. You must also keep records of the date, time, and duration of each alert, the time corrective action was initiated and completed, and a brief description of the cause of the alert and the corrective action taken. You must also record the percent of the operating time during each 6-month period that the conditions exist for an alert. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alert time is counted. If corrective action is required, each alert shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alert time shall be counted as the actual amount of time taken to initiate corrective action.

(8) To demonstrate compliance with the applicable alternative CO CEMS emission limit listed in Tables 1, 2, or 11 through 13 to Subpart DDDDD, you must meet the requirements in paragraphs (a)(8)(i) through (iv) of this section.

(i) Continuously monitor CO according to §§63.7525(a) and 63.7535.

(ii) Maintain a CO emission level below or at your applicable alternative CO CEMS-based standard in Tables 1 or 2 or 11 through 13 to Subpart DDDDD at all times the affected unit is subject to numeric emission limits.

(iii) Keep records of CO levels according to §63.7555(b).

(iv) You must record and make available upon request results of CO CEMS performance audits, dates and duration of periods when the CO CEMS is out of control to completion of the corrective actions necessary to return the CO CEMS to operation consistent with your site-specific monitoring plan.

(9) The owner or operator of a boiler or process heater using a PM CPMS or a PM CEMS to meet requirements of Subpart DDDDD shall install, certify, operate, and maintain the PM CPMS or PM CEMS in accordance with your site-specific monitoring plan as required in §63.7505(d).

(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to limited-use boilers and process heaters, as defined in §63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and

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legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

(11) If your boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of this section), you must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance.

(12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in §63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.

(13) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

(14) If you are using a CEMS measuring mercury emissions to meet requirements of Subpart DDDDD you must install, certify, operate, and maintain the mercury CEMS as specified in paragraphs (a)(14)(i) and (ii) of this section.

(i) Operate the mercury CEMS in accordance with performance specification 12A of 40 CFR part 60, appendix B or operate a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in 40 CFR s. 63.7545(e)(2)(iii) for mercury CEMS or it must be 720 hours if you specified a 720 hour basis in 40 CFR s. 63.7545(e)(2)(iii) for mercury CEMS. For each day in which the unit operates, you must obtain hourly mercury concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a mercury CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR part 60, appendix B, and quality assurance procedure 6 of 40 CFR part 60, appendix F.

(15) If you are using a CEMS to measure HCl emissions to meet requirements of Subpart DDDDD, you must install, certify, operate, and maintain the HCl CEMS as specified in paragraphs (a)(15)(i) and (ii) of this section. This option for an affected unit takes effect on the date a final performance specification for an HCl CEMS is published in the Federal Register or the date of approval of a site-specific monitoring plan.

(i) Operate the continuous emissions monitoring system in accordance with the applicable performance specification in 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in 40 CFR s. 63.7545(e)(2)(iii) for HCl CEMS or it must be 720 hours if you specified a 720 hour basis in 40 CFR s. 63.7545(e)(2)(iii) for HCl CEMS. For each day in which the unit operates, you must obtain hourly HCl concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a HCl CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the HCl mass emissions rate to the atmosphere according to the requirements of the applicable performance specification of 40 CFR part 60, appendix B, and the quality assurance procedures of 40 CFR part 60, appendix F.

(16) If you demonstrate compliance with an applicable TSM emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum TSM input using Equation 9 of §63.7530. If the results of recalculating the maximum TSM input using Equation 9 of §63.7530 are higher than the maximum total selected input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the TSM emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(b). You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(17) If you demonstrate compliance with an applicable TSM emission limit through fuel analysis for solid or liquid fuels, and you plan to burn a new type of fuel, you must recalculate the TSM emission rate using Equation 18 of 40 CFR s. 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(i) You must determine the TSM concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of TSM.

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(iii) Recalculate the TSM emission rate from your boiler or process heater under these new conditions using Equation 18 of 40 CFR s. 63.7530. The recalculated TSM emission rate must be less than the applicable emission limit.

(18) If you demonstrate continuous PM emissions compliance with a PM CPMS you will use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. You will conduct your performance test using the test method criteria in Table 5 of Subpart DDDDD. You will use the PM CPMS to demonstrate continuous compliance with this operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(i) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis.

(ii) For any deviation of the 30-day rolling PM CPMS average value from the established operating parameter limit, you must:

(A) Within 48 hours of the deviation, visually inspect the air pollution control device (APCD);

(B) If inspection of the APCD identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

(C) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph.

(iii) PM CPMS deviations from the operating limit leading to more than four required performance tests in a 12-month operating period constitute a separate violation of Subpart DDDDD.

(19) If you choose to comply with the PM filterable emissions limit by using PM CEMS you must install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (a)(19)(i) through (vii) of this section. The compliance limit will be expressed as a 30-day rolling average of the numerical emissions limit value applicable for your unit in Tables 1 or 2 or 11 through 13 of Subpart DDDDD.

(i) Install and certify your PM CEMS according to the procedures and requirements in Performance Specification 11— Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to part 60 of this chapter, using test criteria outlined in Table V of this rule. The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh).

(ii) Operate and maintain your PM CEMS according to the procedures and requirements in Procedure 2— Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to part 60 of this chapter.

(A) You must conduct the relative response audit (RRA) for your PM CEMS at least once annually.

(B) You must conduct the relative correlation audit (RCA) for your PM CEMS at least once every 3 years.

(iii) Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (i) of this section.

(iv) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler or process heater operating hours.

(v) You must collect data using the PM CEMS at all times the unit is operating and at the intervals specified this paragraph (a), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.

(vi) You must use all the data collected during all boiler or process heater operating hours in assessing the compliance with your operating limit except:

(A) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions in calculations and report any such periods in your annual deviation report;

(B) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out of control periods in calculations used to report emissions or operating levels and report any such periods in your annual deviation report;

(C) Any data recorded during periods of startup or shutdown.

(vii) You must record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with your site-specific monitoring plan.

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(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 13 to Subpart DDDDD that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in Subpart DDDDD. These deviations must be reported according to the requirements in §63.7550.

(c) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must follow the sampling frequency specified in paragraphs (c)(1) through (4) of this section and conduct this sampling according to the procedures in §63.7521(f) through (i).

(1) If the initial mercury constituents in the gaseous fuels are measured to be equal to or less than half of the mercury specification as defined in §63.7575, you do not need to conduct further sampling.

(2) If the initial mercury constituents are greater than half but equal to or less than 75 percent of the mercury specification as defined in §63.7575, you will conduct semi-annual sampling. If 6 consecutive semi-annual fuel analyses demonstrate 50 percent or less of the mercury specification, you do not need to conduct further sampling. If any semi-annual sample exceeds 75 percent of the mercury specification, you must return to monthly sampling for that fuel, until 12 months of fuel analyses again are less than 75 percent of the compliance level.

(3) If the initial mercury constituents are greater than 75 percent of the mercury specification as defined in §63.7575, you will conduct monthly sampling. If 12 consecutive monthly fuel analyses demonstrate 75 percent or less of the mercury specification, you may decrease the fuel analysis frequency to semi-annual for that fuel.

(4) If the initial sample exceeds the mercury specification as defined in §63.7575, each affected boiler or process heater combusting this fuel is not part of the unit designed to burn gas 1 subcategory and must be in compliance with the emission and operating limits for the appropriate subcategory. You may elect to conduct additional monthly sampling while complying with these emissions and operating limits to demonstrate that the fuel qualifies as another gas 1 fuel. If 12 consecutive monthly fuel analyses samples are at or below the mercury specification as defined in §63.7575, each affected boiler or process heater combusting the fuel can elect to switch back into the unit designed to burn gas 1 subcategory until the mercury specification is exceeded.

(d) For startup and shutdown, you must meet the work practice standards according to items 5 and 6 of Table 3 of Subpart DDDDD.
[s. 285.65(13), Wis. Stats.; 40 CFR 63.7540; 14-DMM-191]

14. Continuous Compliance – Emissions Averaging

40 CFR 63.7541: How do I demonstrate continuous compliance under the emissions averaging provision?

(a) Following the compliance date, the owner or operator must demonstrate compliance with Subpart DDDDD on a continuous basis by meeting the requirements of paragraphs (a)(1) through (5) of this section.

(1) For each calendar month, demonstrate compliance with the average weighted emissions limit for the existing units participating in the emissions averaging option as determined in §63.7522(f) and (g).

(2) You must maintain the applicable opacity limit according to paragraphs (a)(2)(i) and (ii) of this section.

(i) For each existing unit participating in the emissions averaging option that is equipped with a dry control system and not vented to a common stack, maintain opacity at or below the applicable limit.

(ii) For each group of units participating in the emissions averaging option where each unit in the group is equipped with a dry control system and vented to a common stack that does not receive emissions from non-affected units, maintain opacity at or below the applicable limit at the common stack.

(3) For each existing unit participating in the emissions averaging option that is equipped with a wet scrubber, maintain the 30-day rolling average parameter values at or above the operating limits established during the most recent performance test.

(4) For each existing unit participating in the emissions averaging option that has an approved alternative operating parameter, maintain the 30-day rolling average parameter values consistent with the approved monitoring plan.

(5) For each existing unit participating in the emissions averaging option venting to a common stack configuration containing affected units from other subcategories, maintain the appropriate operating limit for each unit as specified in Table 4 to Subpart DDDDD that applies.

(b) Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (5) of this section is a deviation.
[s. 285.65(13), Wis. Stats.; 40 CFR 63.7541; 14-DMM-191]

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15. Notifications

40 CFR 63.7545: What notifications must I submit and when?

(a) You must submit to the Administrator all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

(b) As specified in §63.9(b)(2), if you startup your affected source before January 31, 2013, you must submit an Initial Notification not later than 120 days after January 31, 2013.

(c) As specified in §63.9(b)(4) and (5), if you startup your new or reconstructed affected source on or after January 31, 2013, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source.

(d) If you are required to conduct a performance test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.

(e) If you are required to conduct an initial compliance demonstration as specified in §63.7530, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8), as applicable. If you are not required to conduct an initial compliance demonstration as specified in §63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) and must be submitted within 60 days of the compliance date specified at 40 CFR s. 63.7495(b).

(1) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with Subpart DDDDD, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by you or the EPA through a petition process to be a non-waste under 40 CFR s. 241.3 of this chapter, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of 40 CFR s. 241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration.

(2) Summary of the results of all performance tests and fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits, and including:

(i) Identification of whether you are complying with the PM emission limit or the alternative TSM emission limit.

(ii) Identification of whether you are complying with the output-based emission limits or the heat input-based (i.e., lb/MMBtu or ppm) emission limits,

(iii) Identification of whether you are complying with the arithmetic mean of all valid hours of data from the previous 30 operating days or of the previous 720 hours. This identification shall be specified separately for each operating parameter.

(3) A summary of the maximum CO emission levels recorded during the performance test to show that you have met any applicable emission standard in Tables 1, 2, or 11 through 13 to Subpart DDDDD, if you are not using a CO CEMS to demonstrate compliance.

(4) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing, a CEMS, or fuel analysis.

(5) Identification of whether you plan to demonstrate compliance by emissions averaging and identification of whether you plan to demonstrate compliance by using efficiency credits through energy conservation:

(i) If you plan to demonstrate compliance by emission averaging, report the emission level that was being achieved or the control technology employed on January 31, 2013.

(ii) [Reserved]

(6) A signed certification that you have met all applicable emission limits and work practice standards.

(7) If you had a deviation from any emission limit, work practice standard, or operating limit, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.

(8) In addition to the information required in §63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) “This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR 63 Subpart DDDDD at this site according to the procedures in §63.7540(a)(10)(i) through (vi).”

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(ii) "This facility has had an energy assessment performed according to §63.7530(e)."
(iii) Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: "No secondary materials that are solid waste were combusted in any affected unit."

(f) If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to Subpart DDDDD, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in §63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in §63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section.
(1) Company name and address.
(2) Identification of the affected unit.
(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.
(4) Type of alternative fuel that you intend to use.
(5) Dates when the alternative fuel use is expected to begin and end.

(g) If you intend to commence or recommence combustion of solid waste, you must provide 30 days prior notice of the date upon which you will commence or recommence combustion of solid waste. The notification must identify:
(1) The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) or process heater(s) that will commence burning solid waste, and the date of the notice.
(2) The currently applicable subcategories under Subpart DDDDD.
(3) The date on which you became subject to the currently applicable emission limits.
(4) The date upon which you will commence combusting solid waste.

(h) If you have switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:
(1) The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.
(2) The currently applicable subcategory under Subpart DDDDD.
(3) The date upon which the fuel switch or physical change occurred.
[s. 285.65(13), Wis. Stats.; 40 CFR 63.7545; 14-DMM-191]

16. Reports

40 CFR 63.7550: What reports must I submit and when?

(a) You must submit each report in Table 9 to Subpart DDDDD that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under 40 CFR s. 63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to Subpart DDDDD and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct an annual, biennial, or 5-year tune-up according to 40 CFR s. 63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.
(1) The first semi-annual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 CFR s. 63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in 40 CFR s. 63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 CFR s. 63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in 40 CFR s. 63.7495.
(2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in §63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January

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(3) Each subsequent semi-annual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.

(4) Each subsequent semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

(5) For each affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this chapter, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR s. 70.6(a)(3)(iii)(A) or 40 CFR s. 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established in the permit instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to the requirements of a tune up you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of this section, (xiv) and (xvii) of this section, and paragraph (c)(5)(iv) of this section for a limited-use boiler or process heater.

(2) If you are complying with the fuel analysis you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii), (vi), (x), (xi), (xiii), (xv), (xvii), (xviii) and paragraph (d) of this section.

(3) If you are complying with the applicable emissions limit with performance testing you must submit a compliance report with the information in (c)(5)(i) through (iii), (vi), (vii), (viii), (ix), (xi), (xiii), (xv), (xvii), (xviii) and paragraph (d) of this section.

(4) If you are complying with an emissions limit using a CMS the compliance report must contain the information required in paragraphs (c)(5)(i) through (iii), (v), (vi), (xi) through (xiii), (xv) through (xvii), and paragraph (e) of this section.

(5)(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) The total operating time during the reporting period.

(v) If you use a CMS, including CEMS, COMS, or CPMS, you must include the monitoring equipment manufacturer(s) and model numbers and the date of the last CMS certification or audit.

(vi) The total fuel use by each individual boiler or process heater subject to an emission limit within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or your basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.

(vii) If you are conducting performance tests once every 3 years consistent with §63.7515(b) or (c), the date of the last 2 performance tests and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.

(viii) A statement indicating that you burned no new types of fuel in an individual boiler or process heater subject to an emission limit. Or, if you did burn a new type of fuel and are subject to a HCl emission limit, you must submit the calculation of chlorine input, using Equation 7 of §63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 16 of §63.7530 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a mercury emission limit, you must submit the calculation of mercury input, using Equation 8 of §63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 17 of §63.7530 that demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a TSM emission limit, you must submit the calculation of TSM input, using Equation 9 of §63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate, using Equation 18 of §63.7530, that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

(ix) If you wish to burn a new type of fuel in an individual boiler or process heater subject to an emission limit and you cannot demonstrate compliance with the maximum chlorine input operating limit using Equation 7 of §63.7530 or the maximum mercury input operating limit using Equation 8 of §63.7530, or the maximum TSM input operating limit using Equation 9 of

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§63.7530 you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

(x) A summary of any monthly fuel analyses conducted to demonstrate compliance according to §§63.7521 and 63.7530 for individual boilers or process heaters subject to emission limits, and any fuel specification analyses conducted according to §§63.7521(f) and 63.7530(g).
(xi) If there are no deviations from any emission limits or operating limits in Subpart DDDDD that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.
(xii) If there were no deviations from the monitoring requirements including no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in §63.8(c)(7), a statement that there were no deviations and no periods during which the CMS were out of control during the reporting period.
(xiii) If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by you during a malfunction of a boiler, process heater, or associated air pollution control device or CMS to minimize emissions in accordance with §63.7500(a)(3), including actions taken to correct the malfunction.
(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.
(xv) If you plan to demonstrate compliance by emission averaging, certify the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in §63.7545(e)(5)(i).
(xvi) For each reporting period, the compliance reports must include all of the calculated 30 day rolling average values for CEMS (CO, HCl, SO_2 and mercury), 10 day rolling average values for CO CEMS when the limit is expressed as a 10 day instead of 30 day rolling average, and the PM CPMS data.
(xvii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
(xviii) For each instance of startup or shutdown include the information required to be monitored, collected, or recorded according to the requirements of 40 CFR s. 63.7555(d).

(d) For each deviation from an emission limit or operating limit in Subpart DDDDD that occurs at an individual boiler or process heater where you are not using a CMS to comply with that emission limit or operating limit, or from the work practice standards for periods if startup and shutdown, the compliance report must additionally contain the information required in paragraphs (d)(1) through (3) of this section.
(1) A description of the deviation and which emission limit, operating limit, or work practice standard from which you deviated.
(2) Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.
(3) If the deviation occurred during an annual performance test, provide the date the annual performance test was completed.

(e) For each deviation from an emission limit, operating limit, and monitoring requirement in Subpart DDDDD occurring at an individual boiler or process heater where you are using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the information required in paragraphs (e)(1) through (9) of this section. This includes any deviations from your site-specific monitoring plan as required in §63.7505(d).
(1) The date and time that each deviation started and stopped and description of the nature of the deviation (i.e., what you deviated from).
(2) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.
(3) The date, time, and duration that each CMS was out of control, including the information in §63.8(c)(8).
(4) The date and time that each deviation started and stopped.
(5) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.
(6) A characterization of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
(7) A summary of the total duration of CMS's downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

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(8) A brief description of the source for which there was a deviation.
(9) A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.
(f)-(g) [Reserved]

(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.
(1) Within 60 days after the date of completing each performance test (as defined in 40 CFR s. 63.2) required by Subpart DDDDD, you must submit the results of the performance tests, including any fuel analyses, following the procedure specified in either paragraph (h)(1)(i) or (ii) of this section.
(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (http://www.epa.gov/ttn/chief/ert/index.html), you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/).) Performance test data must be submitted in a file format generated through use of the EPA's ERT or an electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.
(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13.
(2) Within 60 days after the date of completing each CEMS performance evaluation (as defined in 63.2), you must submit the results of the performance evaluation following the procedure specified in either paragraph (h)(2)(i) or (ii) of this section.
(i) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance evaluation data must be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance evaluation information being transmitted is CBI, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.
(ii) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in §63.13.
(3) You must submit all reports required by Table 9 of Subpart DDDDD electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for Subpart DDDDD. Instead of using the electronic report in CEDRI for Subpart DDDDD, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to Subpart DDDDD is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.
[s. 285.65(13), Wis. Stats.; 40 CFR 63.7550; 14-DMM-191]

17. Records

40 CFR 63.7555: What records must I keep?

(a) You must keep records according to paragraphs (a)(1) and (2) of this section.
(1) A copy of each notification and report that you submitted to comply with Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted,

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according to the requirements in §63.10(b)(2)(xiv).
(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in §63.10(b)(2)(viii).
(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.

(b) For each CEMS, COMS, and continuous monitoring system you must keep records according to paragraphs (b)(1) through (5) of this section.
(1) Records described in §63.10(b)(2)(vii) through (xi).
(2) Monitoring data for continuous opacity monitoring system during a performance evaluation as required in §63.6(h)(7)(i) and (ii).
(3) Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).
(4) Request for alternatives to relative accuracy test for CEMS as required in §63.8(f)(6)(i).
(5) Records of the date and time that each deviation started and stopped.

(c) You must keep the records required in Table 8 to Subpart DDDDD including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies to you.

(d) For each boiler or process heater subject to an emission limit in Tables 1, 2, or 11 through 13 to Subpart DDDDD, you must also keep the applicable records in paragraphs (d)(1) through (11) of this section.
(1) You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.
(2) If you combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to §241.3(b)(1) and (2) of this chapter, you must keep a record that documents how the secondary material meets each of the legitimacy criteria under §241.3(d)(1) of this chapter. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to §241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfy the definition of processing in §241.2 of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under §241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per §241.4 of this chapter, you must keep records documenting that the material is listed as a non-waste under §241.4(a) of this chapter. Units exempt from the incinerator standards under section 129(g)(1) of the Clean Air Act because they are qualifying facilities burning a homogeneous waste stream do not need to maintain the records described in this paragraph (d)(2).
(3) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 7 of §63.7530, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 16 of §63.7530, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.
(4) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 8 of §63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 17 of §63.7530, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.
(5) If, consistent with §63.7515(b), you choose to stack test less frequently than annually, you must keep a record that documents that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit (or, in specific instances noted in Tables 1 and 2 or 11 through 13 to Subpart DDDDD, less than the applicable emission limit), and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.
(6) Records of the occurrence and duration of each malfunction of the boiler or process heater, or of the associated air pollution control and monitoring equipment.

AAA. 40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers and Process Heaters. Boilers B07, B09 and B11

These Requirements Apply On And After January 31, 2017.

(7) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in §63.7500(a)(3), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to its normal or usual manner of operation.
(8) A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 9 of §63.7530, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 18 of §63.7530, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.
(9) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.
(10) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.
(11) For each startup period, for units selecting paragraph (2) of the definition of “startup” in §63.7575 you must maintain records of the time that clean fuel combustion begins; the time when you start feeding fuels that are not clean fuels; the time when useful thermal energy is first supplied; and the time when the PM controls are engaged.
(12) If you choose to rely on paragraph (2) of the definition of “startup” in §63.7575, for each startup period, you must maintain records of the hourly steam temperature, hourly steam pressure, hourly steam flow, hourly flue gas temperature, and all hourly average CMS data (e.g., CEMS, PM CPMS, COMS, ESP total secondary electric power input, scrubber pressure drop, scrubber liquid flow rate) collected during each startup period to confirm that the control devices are engaged. In addition, if compliance with the PM emission limit is demonstrated using a PM control device, you must maintain records as specified in paragraphs (d)(12)(i) through (iii) of this section.
(i) For a boiler or process heater with an electrostatic precipitator, record the number of fields in service, as well as each field's secondary voltage and secondary current during each hour of startup.
(ii) For a boiler or process heater with a fabric filter, record the number of compartments in service, as well as the differential pressure across the baghouse during each hour of startup.
(iii) For a boiler or process heater with a wet scrubber needed for filterable PM control, record the scrubber's liquid flow rate and the pressure drop during each hour of startup.
(13) If you choose to use paragraph (2) of the definition of “startup” in §63.7575 and you find that you are unable to safely engage and operate your PM control(s) within 1 hour of first firing of non-clean fuels, you may choose to rely on paragraph (1) of definition of “startup” in §63.7575 or you may submit to the delegated permitting authority a request for a variance with the PM controls requirement, as described below.
(i) The request shall provide evidence of a documented manufacturer-identified safety issue.
(ii) The request shall provide information to document that the PM control device is adequately designed and sized to meet the applicable PM emission limit.
(iii) In addition, the request shall contain documentation that:
(A) The unit is using clean fuels to the maximum extent possible to bring the unit and PM control device up to the temperature necessary to alleviate or prevent the identified safety issues prior to the combustion of primary fuel;
(B) The unit has explicitly followed the manufacturer's procedures to alleviate or prevent the identified safety issue; and
(C) Identifies with specificity the details of the manufacturer's statement of concern.
(iv) You must comply with all other work practice requirements, including but not limited to data collection, recordkeeping, and reporting requirements.

(e) If you elect to average emissions consistent with §63.7522, you must additionally keep a copy of the emission averaging implementation plan required in §63.7522(g), all calculations required under §63.7522, including monthly records of heat input or steam generation, as applicable, and monitoring records consistent with §63.7541.

(f) If you elect to use efficiency credits from energy conservation measures to demonstrate compliance according to §63.7533, you must keep a copy of the Implementation Plan required in §63.7533(d) and copies of all data and calculations used to establish credits according to §63.7533(b), (c), and (f).

(g) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must maintain monthly records (or at the frequency required by §63.7540(c)) of the calculations and results of the fuel specification for mercury in Table 6.

AAA. 40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers and Process Heaters. Boilers B07, B09 and B11

These Requirements Apply On And After January 31, 2017.

(h) If you operate a unit in the unit designed to burn gas 1 subcategory that is subject to Subpart DDDDD, and you use an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under this part, other gas 1 fuel, or gaseous fuel subject to another subpart of this part or part 60, 61, or 65, you must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.

[s. 285.65(13), Wis. Stats.; 40 CFR 63.7555; 14-DMM-191]

40 CFR 63.7560: In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years.
[s. 285.65(13), Wis. Stats.; 40 CFR 63.7560; 14-DMM-191]

ZZZ. Conditions Applicable to the Entire Facility

1. Alternate Operating Scenario: Use of raw materials not included in the permit application.

a. Conditions	b. Compliance Demonstration, Reference Test Methods, Recordkeeping and Monitoring Requirements
(1) If the permittee has the capability to burn or use a raw material not included in the application reviewed for this permit, the permittee may use this material without first obtaining a construction permit provided the following conditions are met: (a) The source has continuously had such design capability to burn or use the raw material. (b) The use will not cause or exacerbate the violation of an ambient air quality standard or an ambient air increment. (c) The use is not prohibited by any permit, plan approval or special order applicable to the source. (d) The use will not result in a violation of any emission limit in chs. NR 405, 408, 409, 415 to 436, and 445, Wis. Adm. Code. (e) The use will not subject the source to any standard or regulation under s. 112 of the Clean Air Act (42 USC 7412). (f) The use will not cause the source to become an affected facility for any new source performance standard in ch. NR 440, Wis. Adm. Code or 40 CFR Part 60. (g) The use does not require the source to obtain a permit under ch. NR 405 or ch. NR 408, Wis. Adm. Code. [ss. NR 405.07(1), NR 406.04(4)(a), NR 408.03(1) and NR 440.14(1), Wis. Adm. Code; est. in 445031180-P20]	(1) Any calculations and supporting material required to demonstrate compliance with Condition ZZZ.1.a.(1) shall be kept on file by the permittee. [s.NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20] (2) The permittee shall notify the Department when a new alternate fuel will be fired in any boiler at least six (6) weeks prior to initially firing the fuel. As a part of the notification, the permittee shall provide the analysis which shows that the firing of the new alternate fuel meets the requirements of Condition ZZZ.1.a.(1). [s. NR 439.03(1)(a), Wis. Adm. Code; est. in 445031180-P10]

ZZZ. Conditions Applicable to the Entire Facility

2. Emissions Testing

a. Conditions	**b. Compliance Demonstration, Reference Methods, Recordkeeping and Monitoring Requirements**
(1) For each source and pollutant listed, emission tests shall be conducted every 24 months, within 90 days of the anniversary date shown below, except as provided in Condition ZZZ.2.a.(2). [s. NR 439.075(3)(b), Wis. Adm. Code; est. in 445031180-P10]	(1) Whenever emissions testing is required: (a) Unless the Department requires or approves the performance of a test at less than capacity, all compliance emission tests shall be performed with the equipment operating at capacity or as close to capacity as practicable. [s. NR 439.07(1), Wis. Adm. Code; est. in 445031180-P10]
(2) The permittee may request and the Department may grant a written waiver of the next scheduled biennial test if any of the following applies: (a) The source will be ceasing operation within one year of a scheduled test. (b) The most recently completed test demonstrates that emissions are 50 percent or less of the applicable emission limitation. (c) The source has not operated more than 360 hours in the previous 12-month period prior to the scheduled test date. (d) The most recently completed test, was conducted less than 12 months prior to the date that testing would be required under Condition ZZZ.2.a.(1). [s. NR 439.075(4)(a), Wis. Adm. Code; est. in 445031180-P10]	(b) The Department shall be notified in writing at least 20 business days prior to any stack testing so a Department representative can witness the testing. At the time of notification an emissions test plan shall be submitted to the Department for approval. When approved in writing, an equivalent test method may be substituted for the reference test method specified in the permit. [s. NR 439.07(2), Wis. Adm. Code; est. in 445031180-P10] (c) Two copies of the test report shall be submitted to the Department within 60 days of the test. [s. NR 439.07(9), Wis. Adm. Code; est. in 445031180-P10] (2) At times specified in this permit, or when requested by the Department, the permittee shall perform emissions testing. [s. NR 439.075(1)(b), Wis. Adm. Code; est. in 445031180-P10]

Source	Pollutant Tested	Date
Boiler B07	Particulate matter	Sept. 05, 2009
Boiler B09		July 11, 2009
Boiler B11	Particulate matter	July 11, 2009
Boiler B08		June 14, 2008
Boiler B08	Particulate matter	May 11, 2009
Boiler B08		March 02, 2009
Boiler B10	Particulate matter	June 14, 2008
Boiler B10	Sulfur dioxide	May 11, 2009
Lime Kiln P12	Total Reduced Sulfur	March 02, 2009
	Particulate matter	June 26, 2008
	Sulfur dioxide	
	Total Reduced Sulfur	
	Particulate matter	

ZZZ. **Conditions Applicable to the Entire Facility**	
3. Compliance Reports	
a. Conditions	**b. Compliance Demonstration, Reference Test Methods, Recordkeeping and Monitoring Requirements**
(1) The permittee shall submit the periodic reports required under these conditions to the Northeast Region Air Program, 2984 Shawano Ave, Green Bay, WI 54313-6727. [s. NR 407.09(1)(c)3., Wis. Adm. Code; est. in 445031180-P20] (2) Submit a semiannual summary of the monitoring required by this permit, due March 1 for the period from July 1 to December 31 of the preceding year, and due September 1 for the period from January 1 to June 30 of the current year, each year that this permit is in effect. The content of the submittal is described in item D of Part II of this permit. In addition, semiannual MACT compliance reports may be combined with these reports. [s. NR 439.03(1)(b), Wis. Adm. Code; est. in 445031180-P10] (3) Submit certification of compliance with the requirements of this permit, due March 1 for the period from January 1 to December 31 of the preceding year, each year that this permit is in effect. The content of the submittal is described in item N of Part II of this permit. [s. NR 439.03(1)(c), Wis. Adm. Code; est. in 445031180-P10]	(1) Quarterly Excess Emission Reports shall be submitted within 30 days of the end of each calendar quarter for emissions from B09, B11, B08 and B10, and contain the following information about each period of excess emissions: (a) the date, starting/ending times, duration, (b) the cause, (c) measures taken to reduce emissions, (d) monitoring system malfunctions/repairs, except zero and span checks, (e) Process down time, (f) When no excess emissions occurred and the monitoring system had no downtime, the report shall be filed stating such. (g) Periods of excess emissions shall be reported as follows: (i) For opacity, any 6-minute period during which the average opacity exceeds the applicable emission limit. (ii) For sulfur dioxide, any 24-hour rolling average during which the average sulfur dioxide emissions exceed the applicable emission limitation. [s. NR 439.09(10), Wis. Adm. Code; est. in 445031180-P20] (2) Semiannual Excess Emissions Reports shall be submitted within 30 days of the end of each six-month period (January 1 to June 30 and July 1 to December 31) for TRS emissions from Process P12. [s. 285.65(13), Wis. Stats.; 40 CFR s. 60.284(d); s. NR 440.45(5)(d), Wis. Adm. Code; est. in 445031180-P20] (3) Quarterly Fuel Sampling Reports shall be submitted within 30 days of the end of each calendar quarter for B07, B09, B11, B08 and P12, per condition ZZZ.5.b.(1). [s. NR 439.085(3)(a)2., Wis. Adm. Code; est. in 445031180-P10] (4) Quarterly MACT Excess Emission Reports shall be submitted within 30 days of the end of each calendar quarter for B08, B10, P08, P10 and P12, if applicable as described in condition ZZZ.8.b.(7). [s. 285.65(13), Wis. Stats.; 40 CFR s. 63.867(c); est. in 445031180-P10] (5) Semiannual MACT compliance reports: The permittee must submit semiannual compliance reports according to the requirements of: (a) Table 1 to Subpart S for Subpart S sources, and (b) 40 CFR s. 63.867, for Subpart MM sources. [ch. NR 460, Wis. Adm. Code; s. 285.65(13), Wis. Stats.; Table 1 to Part 63, Subpart S; 40 CFR s. 63.867; est. in 445031180-P20]

ZZZ. Conditions Applicable to the Entire Facility

4. Stack Parameters

a. Conditions

(1)(a) Stacks may not be equipped with a rain hat nor discharge other than vertically.
(b) The facility stacks listed below shall have heights no less than those listed.
[s. 285.65(3), Wis. Stats.; 14-DMM-191]

Stack No.	Height (ft)	Diameter or Dimensions (ft)
S07	161	5.50
S09	290	8.50
S09Bypass	158	5.0
S11Bypass	172	2.1 x 2.1
	186	6.50
S08	186	6.00
S10	174	2.10
6.00	108	2.33
B08/B10by-	121	4.00
pass	130	3.90
S05	72	1.57
S06	42	0.95
S12	35	2.56
S19	36	2.03
S52	35.5	2.03
S55	35.4	1.12
S56A	35.1	1.12
S56B	33	2.1
S59A	35	2 x 2
S59B	75	2.3
S72	69	2.0
S76	64	1.2
S20	18	1.34
S22	80	2.0
S26	104	1.34
S39	12	0.33
S25	54	3.3
S27	57	3.3 x 2.4
S28	73	4.4
S11	69	4.9
S13	64	4.3
S14	75	4.0
S15	102	0.825 x 0.825
S16	65	1.0
S81	65	1.0
S501	65	1.0
S502A		
S502B		
S503		

b. Compliance Demonstration, Reference Test Methods, Recordkeeping and Monitoring Requirements

(1) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. Such records shall clearly indicate the identification number of each stack. [ss. NR 407.09(1)(c)2. and NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P10]

ZZZ. Conditions Applicable to the Entire Facility	
5. Requirements for Residual Fuel Oil	
a. Conditions	**b. Compliance Demonstration, Reference Test Methods, Recordkeeping and Monitoring Requirements**
(1) The permittee shall conduct monitoring and keep records in accordance with condition ZZZ.5.b.(1). [ss. NR 439.085(3)(a) and NR 417.07(7)(a)4., Wis. Adm. Code; est. in 445031180-P10]	(1) The permittee shall sample residual fuel oil and submit reports on residual fuel oil quality in the following manner: (a) Perform liquid fossil fuel sampling for each storage tank of residual fuel oil and analyze these samples for sulfur content and heat content according to the applicable methods and procedures for sampling and analysis in s. NR 439.08(2). Sampling shall be performed for each tank volume turnover or on a monthly basis. (b) Submit quarterly reports within 30 days following the end of each calendar quarter which include the following information for each month during the calendar quarter: 1. Total quantity of residual fuel oil burned, and quantity burned by source, each expressed in thousands of gallons. 2. Weighted average percent of the sulfur content of the residual fuel oil burned. 3. Weighted average heat content expressed in Btu per gallon of residual fuel oil burned. 4. Weighted average sulfur dioxide emission rate in terms of pounds of sulfur dioxide per million Btu heat input from the residual fuel oil burned. [ss. NR 439.085(3)(a) and NR 417.07(7)(a)4., Wis. Adm. Code; est. in 445031180-P10]
6. Facility-Wide Emissions of Sulfur Dioxide	
a. Conditions	**b. Compliance Demonstration, Reference Test Methods, Recordkeeping and Monitoring Requirements**
(1) Emissions may not exceed 9657 tons per calendar year. [s. NR 417.07(5)(g), Wis. Adm. Code; est. in 445031180-P20]	(1)(a) The permittee shall keep monthly records of the tons of sulfur dioxide emitted per month from all sources. (b) The permittee shall keep records of the tons of sulfur dioxide emitted from the entire facility in each calendar year. [s. NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P20]

ZZZ. Conditions Applicable to the Entire Facility	
7. Selection of General Requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) from ch. NR 460, Wis. Adm. Code	
a. Conditions	**b. Compliance Demonstration, Reference Methods, Recordkeeping and Monitoring Requirements**
(1) At all times, including periods of startup, shutdown, and malfunction (SSM), the permittee shall operate and maintain any affected source, including associated air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown or malfunction, the general duty to minimize emissions requires that the permittee reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown or malfunction does not require the permittee to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether the operation and maintenance procedures are being used will be based on information available to the department, which may include monitoring results; review of operation and maintenance procedures, including the SSM plan; review of operation and maintenance records; and inspections of the source. [40 CFR s. 63.6(e)(1)(i); s. NR 460.05(4)(a)1., Wis. Adm. Code; est. in 445031180-P10] (2) The permittee shall develop and implement a written SSM plan that meets the requirements of s. NR 439.11 and describes, in detail, procedures for operating and maintaining the source during periods of SSM and a program of corrective action for malfunctioning process and air pollution control and monitoring equipment used to comply with the relevant standard. This plan shall be developed by the permittee by the source's compliance date for that relevant standard. The plan shall be designed to achieve all of the following: (a) Ensure that, at all times, the permittee operates and maintains each affected source, including associated air pollution control and monitoring equipment, in a manner which satisfies the general duty to minimize emissions. (b) Ensure that the permittee is prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants. (c) Reduce the reporting burden associated with	(1) When actions taken by the permittee during a startup, shutdown or malfunction, including actions taken to correct a malfunction, are consistent with the procedures specified in the affected source's SSM plan, the permittee shall keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a checklist, or other effective form of recordkeeping that confirms conformance with the SSM plan for that event. In addition, the permittee shall keep records of these events as specified in s. NR 460.09(2), including records of the occurrence and duration of each startup, shutdown or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. [40 CFR s. 63.6(e)(3)(iii); s. 285.65(13), Wis. Stats.; s. NR 460.05(4)(c)3., Wis. Adm. Code; est. in 445031180-P10] (2) If an action taken by the permittee during a startup, shutdown or malfunction, including an action taken to correct a malfunction, is not consistent with the procedures specified in the affected source's SSM plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the permittee shall record the actions taken for that event and shall report the actions taken within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with s. NR 460.09(4)(e), including records of the occurrence and duration of each startup, shutdown or malfunction of operation and each malfunction of the air pollution control and monitoring equipment.[40 CFR s. 63.6(e)(3)(iv); s. 285.65(13), Wis. Stats.; s. NR 460.05(4)(c)4., Wis. Adm. Code; est. in 445031180-P10] (3) The permittee shall maintain at the affected source a current SSM plan and shall make the plan available upon request for inspection and copying by the department. In addition, if the SSM plan is subsequently revised, the permittee shall maintain at the affected source each previous version of the SSM plan, and shall make each previous version available for inspection and copying by the department for a period of 5 years after revision of the plan. The department may at any time request in writing that the permittee submit a copy of any SSM plan, or a portion of the plan, which is maintained at the affected source or in the possession of the permittee. Upon receipt of a request, the permittee shall promptly submit a copy of the requested plan, or a portion of the plan, to the department. The department shall request that the permittee submit a particular SSM plan, or a portion of the plan, whenever a member of the public submits a specific and reasonable request to examine or to receive a copy of that plan or portion of the plan. The permittee may elect to submit the required copy of any SSM plan to the department in an

ZZZ. Conditions Applicable to the Entire Facility

7. Selection of General Requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) from ch. NR 460, Wis. Adm. Code

periods of SSM (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).
[40 CFR s. 63.6(e)(3)(i); s. NR 460.05(4)(c)1., Wis. Adm. Code; est. in 445031180-P10]

(3) The permittee shall maintain and operate each continuous monitoring system (CMS) as specified in the permit, s. NR 460.07, and in a manner consistent with good air pollution control practices. [40 CFR s. 63.8(c)(1); s. 285.65(13), Wis. Stats.; s. NR 460.07(3)(a), Wis. Adm. Code; est. in 445031180-P10]

(4) Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:
1. All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.
2. All CEMS for measuring emissions other than opacity shall complete a minimum of one cycle of operation, which includes sampling, analyzing and data recording, for each successive 15-minute period.
[40 CFR s. 63.8(c)(4); s. 285.65(13), Wis. Stats.; s. NR 460.07(3)(d), Wis. Adm. Code; est. in 445031180-P10]

(5) Unless otherwise approved by the department, minimum procedures for COMS shall include a method for producing a simulated zero opacity condition and an upscale (high-level) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Procedures shall provide a system check of all the analyzer's internal optical surfaces and all electronic circuitry, including the lamp and photodetector assembly normally used in the measurement of opacity.
[40 CFR s. 63.8(c)(5); s. 285.65(13), Wis. Stats.; s. NR 460.07(3)(e), Wis. Adm. Code; est. in 445031180-P10]

(6) A CMS is out of control if any of the following occurs:
a. The zero (low-level), mid-level, if applicable, or high-level calibration drift exceeds 2 times the applicable calibration drift specification in the applicable performance specification or in the relevant standard.

electronic format. If the permittee claims that any portion of a SSM plan is confidential business information entitled to protection from disclosure under 114(c) of the Act (42 USC 7414(c)) or 40 CFR 2.301, the material which is claimed as confidential shall be clearly designated.
[40 CFR s. 63.6(e)(3)(v); s. 285.65(13), Wis. Stats.; s. NR 460.05(4)(c)5., Wis. Adm. Code; est. in 445031180-P10]

(4) Based on the results of a determination made under condition ZZZ.7.a.(1), the department may require that a permittee of an affected source make changes to the SSM plan for that source. The department shall require appropriate revisions to a SSM plan, if the department finds that the plan does any of the following:
a. Does not address a startup, shutdown or malfunction event that has occurred.
b. Fails to provide for the operation of the source, including associated air pollution control and monitoring equipment, during a startup, shutdown or malfunction event in a manner consistent the general duty to minimize emissions.
c. Does not provide adequate procedures for correcting malfunctioning process and air pollution control and monitoring equipment as quickly as practicable.
d. Includes an event that does not meet the definition of startup, shutdown or malfunction listed in s. NR 460.02(37r), (36) and (24c), respectively.
[40 CFR s. 63.6(e)(3)(vii); s. 285.65(13), Wis. Stats.; s. NR 460.05(4)(c)7., Wis. Adm. Code; est. in 445031180-P10]

(5) The permittee may periodically revise the SSM plan for the affected source as necessary to satisfy the requirements of 40 CFR part 63 or to reflect changes in equipment or procedures at the affected source. Unless the department provides otherwise, the permittee may make the revisions to the SSM plan without prior approval by the administrator or the department. However, each revision to a SSM plan shall be reported in the semiannual report. If the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSM plan at the time the permittee developed the plan, the permittee shall revise the SSM plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the permittee makes any revision to the SSM plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under 40 CFR part 63, the revised plan may not take effect until after the permittee has provided a written notice describing the revision to the department.
[40 CFR s. 63.6(e)(3)(viii); s. 285.65(13), Wis. Stats.; s. NR 460.05(4)(c)8., Wis. Adm. Code; est. in 445031180-P10]

ZZZ. Conditions Applicable to the Entire Facility	
7. Selection of General Requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) from ch. NR 460, Wis. Adm. Code	
b. The CMS fails a performance test audit, including a cylinder gas audit, relative accuracy audit, relative accuracy test audit or linearity test audit. c. The COMS calibration drift exceeds 2 times the limit in the applicable performance specification in the relevant standard. [40 CFR s. 63.8(c)(7); s. 285.65(13), Wis. Stats.; s. NR 460.07(3)(g), Wis. Adm. Code; est. in 445031180-P10]	(6) The owner or operator of a CMS that is not a continuous parameter monitoring system (CPMS), which is installed in accordance with the provisions of 40 CFR part 63 and the applicable CMS performance specifications, shall check the zero (low-level) and high-level calibration drifts at least once daily in accordance with the written procedure specified in the performance evaluation plan developed under sub. (5)(c)1. and 2. The zero (low-level) and high-level calibration drifts shall be adjusted, at a minimum, whenever the 24-hour zero (low-level) drift exceeds 2 times the limits of the applicable performance specifications in the relevant standard. The system shall allow the amount of excess zero (low-level) and high-level drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For COMS, all optical and instrumental surfaces exposed to the effluent gases shall be cleaned prior to performing the zero (low-level) and high-level drift adjustments; the optical surfaces and instrumental surfaces shall be cleaned when the cumulative automatic zero compensation, if applicable, exceeds 4% opacity. The CPMS shall be calibrated prior to use for the purposes of complying with this section. The CPMS shall be checked daily for indication that the system is responding. If the CPMS system includes an internal system check, results shall be recorded and checked daily for proper operation. [40 CFR s. 63.8(c)(6); s. 285.65(13), Wis. Stats.; s. NR 460.07(3)(f), Wis. Adm. Code; est. in 445031180-P10]

ZZZ. Conditions Applicable to the Entire Facility

8. Additional Requirements of 40 CFR Part 63, Subpart MM: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources at Kraft Pulp Mills

a. Conditions	**b. Compliance Demonstration, Test Methods, Recordkeeping and Monitoring Requirements**
(1) The permittee may propose alternate particulate matter (PM) emission limits (i.e. a bubble limit) for existing affected sources (i.e. B08, B10, P08, P10, P12) using the procedures of 40 CFR §63.865(a). Each proposal is subject to department approval and requires a revision of the operation permit. [40 CFR §63.862(a)(1)(ii); s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (2) An affected source that operates less than 6,300 hours per year shall comply with one of the following PM limits in lieu of a bubble limit established under condition ZZZ.8.a.(1): (a) 0.044 grains of PM per dry standard cubic foot (gr/dscf) corrected to 8 percent oxygen from a recovery boiler, (b) 0.20 pounds of PM per dry ton of black liquor solids fired from a smelt dissolving tank, (c) 0.064 grains of PM per dry standard cubic foot (gr/dscf) corrected to 10 percent oxygen from the lime kiln. [40 CFR §63.862(a)(1)(iii); s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (3) For each affected source the permittee must establish operating ranges for each monitoring parameter, using the test methods in 40 CFR §§63.7 and 63.865, at the following times: (a) During the initial performance test, or (b) Using parameter values recorded during previous performance tests, or (c) By conducting additional performance tests for the specific purpose of establishing operating ranges. The permittee must certify that all control techniques and processes have not been modified subsequent to the testing upon which the data used to establish the operating parameter ranges were obtained. [40 CFR §63.864(j) and s. 285.65(13), Wis. Stats.] (4) The permittee shall implement corrective action as specified in the startup, shutdown, and malfunction (SSM) plan when any of the following exceedances occur:	(1)(a) Whenever a performance test is required the permittee shall measure emissions of particulate matter with U.S. EPA Method 5 or Method 29. The sampling time and sample volume for each run must be at least 60 minutes and 31.8 dscf. Water must be used as the cleanup solvent instead of acetone in the sample recovery procedure. The PM concentration must be corrected to the appropriate oxygen concentration as follows: $C_{corr} = C_{meas} \times \frac{21 - X}{21 - Y}$ Where: C_{corr} = The measured concentration corrected for oxygen, gr/dscf; C_{meas} = The measured concentration uncorrected for oxygen, gr/dscf; X = The corrected volumetric oxygen concentration (8 percent for kraft recovery furnaces and 10 percent for kraft lime kilns); and Y = The measured average volumetric oxygen concentration. (b) Method 3A or 3B in appendix A of 40 CFR part 60 must be used to determine the oxygen concentration. The gas sample must be taken at the same time and at the same traverse points as the particulate sample. (c) Method 17 may be used if a constant value of 0.004 gr/dscf is added to the results and the stack temperature is no greater than 400 °F. [40 CFR §63.865(b); s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (2) The permittee must develop and implement a written SSM plan as described in 40 CFR s. 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of SSM, and a program of corrective action for malfunctioning process and control systems used to comply with the standards. In addition to the information required in 40 CFR §63.6(e)(3), the plan must include: (a) procedures for responding to any process parameter level that is inconsistent with the established operating range, including: (i) procedures to determine and record the cause of an operating parameter exceedance and the time the

ZZZ. Conditions Applicable to the Entire Facility	
8. Additional Requirements of 40 CFR Part 63, Subpart MM: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources at Kraft Pulp Mills	
a. Conditions	**b. Compliance Demonstration, Test Methods, Recordkeeping and Monitoring Requirements**
(a) The average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity on stacks S08 or S10 (recovery boiler stacks controlled by ESPs); (b) Any 3-hour average parameter value monitored on the wet scrubbers of a smelt dissolving tank or lime kiln is outside the allowed range. [40 CFR §63.864(k)(1); s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (5) Owners or operators of all affected sources or process units are in violation of the standards of 40 CFR §63.862 if the following monitoring exceedances occur: (a) When opacity is greater than 35 percent for 6 percent or more of the operating time within any quarterly period on stacks S08 or S10 (recovery boiler stacks that are controlled by ESPs); (b) Within a 6-month reporting period, when six or more 3-hour average parameter values monitored on the wet scrubber for a smelt dissolving tank are outside the allowed range, and the exceedances are not excused periods under the startup, shutdown, or malfunction provisions. (c) Within a 6-month reporting period, when six or more 3-hour average parameter values monitored on the wet scrubber for the lime kiln are outside the allowed range, and the exceedances are not excused periods under the startup, shutdown, or malfunction provisions. No more than one exceedance is attributed to a given 24-hour period. [40 CFR §63.864(k)(2); s. 285.65(13), Wis. Stats.; est. in 445031180-P10]	exceedance began and ended; (ii) corrective actions to be taken in the event of an operating parameter exceedance, including procedures for recording the actions taken to correct the exceedance. (b) a maintenance schedule for each control technique that is consistent with, but not limited to, the manufacturer's instructions and recommendations for routine and long-term maintenance; (c) an inspection schedule for each continuous monitoring system (CMS) to ensure at least once in each 24-hour period that each CMS is properly functioning. [40 CFR §63.866(a); s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (3) The permittee must maintain records whenever corrective action is required or a violation occurs. [40 CFR §63.866(b); s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (4) The permittee must maintain records of the following information: (a) Records of black liquor solids firing rates in units of tons/day for all recovery boilers; (b) Records of CaO production rates in units of tons/day for the lime kiln; (c) Records of parameter monitoring data required under 40 CFR §63.864, including any period when the operating parameter levels were inconsistent with the levels established during the initial performance test, with a brief explanation of the cause of the deviation, the time the deviation occurred, the time corrective action was initiated and completed, and the corrective action taken; (d) Records and documentation of supporting calculations for compliance determinations made under 40 CFR §§63.865(a) through (e); (e) Records of monitoring parameter ranges established for each affected source or process unit; (f) Daily and cumulative-hour records by year, of the hours of operation of B08, B10, P08, P10 and P12. [40 CFR §63.866(c); ss. 285.65(13), Wis. Stats.; s. NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P10] (5) After the department has approved the PM emissions limits in 63.862(a)(1)(ii) for any process unit, the permittee must notify the department before any of the following actions are taken: (a)The air pollution control system for any process unit is modified or replaced;

ZZZ. Conditions Applicable to the Entire Facility	
8. Additional Requirements of 40 CFR Part 63, Subpart MM: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Recovery Combustion Sources at Kraft Pulp Mills	
a. Conditions	**b. Compliance Demonstration, Test Methods, Recordkeeping and Monitoring Requirements**
	(b) Any affected unit is shut down for more than 60 consecutive days; (c)A continuous monitoring parameter for the process unit is changed; or (d) the black liquor solids firing rate for any kraft recovery boiler during any 24-hour averaging period is increased by more than 10 percent above the level measured during the most recent performance test. (e) any source subject to an alternate PM emission limit operates less than 6300 hours per year. [40 CFR §63.867(b)(3); ss. 285.65(13), Wis. Stats.; NR 407.09(4)(a), Wis. Adm. Code; est. in 445031180-P10] (6) A kraft mill complying with the PM emissions limits in 40 CFR §63.862(a)(1)(ii) and seeking to perform the actions in condition ZZZ.8.b.(5)(a) or (b) must recalculate the overall PM emissions limit for the group of process units and resubmit the documentation required in 40 CFR §63.867(b)(2) to the department. All alternate PM emissions limits are subject to approval by the department.[40 CFR §63.867(b)(4); s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (7) The permittee must submit a quarterly excess emissions report if measured parameters are as specified in conditions ZZZ.8.a.(4) or (5). This report must contain the information specified in 40 CFR §63.10(c) as well as the number and duration of occurrences when the source met or exceeded the conditions in conditions ZZZ.8.a.(4) or (5). Reporting excess emissions below the violation threshold of condition ZZZ.8.a.(5) does not constitute a violation of the applicable standard. [40 CFR §63.867(c); s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (8) When no exceedances of parameters have occurred, the permittee must submit a semiannual report stating that no excess emissions occurred during the reporting period. [40 CFR §63.867(c)(1); s. 285.65(13), Wis. Stats.; est. in 445031180-P10] (9) The permittee may combine subpart S and subpart MM excess emissions and/or summary reports. [40 CFR §63.867(c)(2); s. 285.65(13), Wis. Stats.; est. in 445031180-P10]

ZZZ. Conditions Applicable to the Entire Facility	
9. Facility-Wide Emissions of ch. NR 445 Hazardous Air Pollutants (HAPs)	
a. Conditions	**b. Compliance Demonstration, Reference Test Methods, Recordkeeping and Monitoring Requirements**
(1) *Emissions of each of the following HAPs may not exceeded the following. (a) formaldehyde – 10,952.6 pounds per year (b) acetaldehyde – 11,929 pounds per year [s. NR *445.07(1)(c), Wis. Adm. Code; est. in 445031180-P20] [25] (2) * Before January 31, 2017, emissions of nickel may not exceed 6881.9 pounds per year. [s. NR *445.07(1)(c), Wis. Adm. Code; est. in 445031180-P20] (3) On and after January 31, 2017, Conditions ZZZ.9.a.(2) and ZZZ.9.b.(2) will no longer apply. [s. NR 445.01(1)(b), Wis. Adm. Code; est. in 445031180-P20]	(1) * The emission rate of each HAP listed under condition ZZZ.9.a.(1) shall be reported annually on the facility air inventory. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code; est. in 445031180-P10] (2) * For calendar years 2015 and 2016, the emission rate of nickel shall be reported annually on the facility air inventory. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code; est. in 445031180-P20]

ZZZ. Conditions Applicable to the Entire Facility
10. Compliance Assurance Monitoring Requirements for Emissions Units B07, B09, B11, B08, B10, P08, P10, P12 and P17
a. Conditions
(1) Operation of Approved Monitoring (a) *Proper Maintenance:* At all times the permittee shall maintain the monitoring required by Conditions A.1.b.(3), B.1.b.(10), D.1.b.(8), E.1.b.(4), F.1.b.(6), and H.2.b.(3) including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment. (b) *Continued Operation:* Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of 40 CFR Part 64, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. (c) *Response to Excursions or Exceedances:* (i) Upon detecting an excursion or exceedance, the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action, or any necessary follow-up actions to return operation to within the indicator range designated condition. (ii) Determination of whether the permittee has used acceptable procedures in response to an excursion or

[25] The emission limitations were the rates reviewed when BACT was established and modeled in the NR 445 BACT analysis.

ZZZ. Conditions Applicable to the Entire Facility

10. Compliance Assurance Monitoring Requirements for Emissions Units B07, B09, B11, B08, B10, P08, P10, P12 and P17

a. Conditions

exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.
(d) *Documentation of Need for Improved Monitoring:* If the permittee identifies a failure to achieve compliance with the emission limitations outlined in Conditions A.1.a.(1) and (3); B.1.a.(1), (2), (5) and (6); D.1.a.(1), (2) and (7); E.1.a.(1), (2) and (3); F.1.a.(1), (2) and (3); or H.2.a.(1), (2) and (3), for which the CAM requirements outlined in Conditions A.1.b.(3), B.1.b.(10), D.1.b.(8), E.1.b.(4), F.1.b.(6), or H.2.b.(3) did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges, the permittee shall promptly notify the Department, and if necessary, submit a proposed revision to this operation permit to address the necessary monitoring changes. Such a revision may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
[s. 285.65(13), Wis. Stats., and 40 CFR s. 64.7; est. in 445031180-P20]

(2) Quality Improvement Plan (QIP) Requirements
(a) Based on the results of a determination made under Condition ZZZ.10.a.(1)(c)(ii), the permittee shall develop and implement a QIP if the required monitoring shows exceedances or excursions in excess of the applicable QIP thresholds specified in Conditions A.1.b.(3), B.1.b.(10), D.1.b.(8), E.1.b.(4), or F.1.b.(6).
(b) *Elements of a QIP:* (i) The permittee shall maintain the QIP in writing and have it available for inspection.
(ii) The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the permittee shall modify the plan to include procedures for conducting one or of the following actions, as appropriate: (1) improved preventive maintenance practices, (2) process operation changes, (3) appropriate improvements to control methods, (4) other steps appropriate to correct control performance, (5) more frequent or improved monitoring (only in conjunction with one or more of steps (1) through (4)).
(c) If a QIP is required, the permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the Department if the period of completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.
(d) Following implementation of a QIP, upon any subsequent determination pursuant to Condition ZZZ.10.a.(1)(c)(ii) the Department may require that the permittee make reasonable changes to the QIP, if the QIP is found to have:
(i) failed to address the cause of the control device performance problems; or
(ii) failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
(e) Implementation of a QIP shall not excuse the permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that applies under federal, state, or local law, or any other applicable requirement of the Clean Air Act.
[s. 285.65(13), Wis. Stats., and 40 CFR s. 64.8; est. in 445031180-P20]

(3)(a) The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 CFR s. 64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40 CFR Part 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).
(b) Instead of paper records, the permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.
[s. 285.65(13), Wis. Stats., and 40 CFR s. 64.9(b) ; est. in 445031180-P20]

ZZZ. Conditions Applicable to the Entire Facility

11. Construction Permit 14-DMM-191 Transitional Language

a. Conditions:

(1) **Notifications**. The permittee shall inform the Department of the following dates:
(a) The date construction commences on any new or modified emission unit(s) addressed in Permit 14-DMM-191.
(b) The date new baghouse C7911 and sorbent injection system C7911DSI become operational.
(c) The date new emission units P501, P502, P503, F504, F505 and F506 become operational.
For purposes of this permit, "operational" shall be defined as the first time of any process related air contaminant is emitted into the ambient air for new emission sources P501, P502, P503, F504, F505 and F506, and the first time any process related air contaminant is emitted into the ambient air after the dry sorbent injection system is operated for the first time for boilers B07, B09 and B11.
[s. NR 439.03(1), Wis. Adm. Code; 14-DMM-191]

(2) **Construction Authorization Expiration**. The Authorization to Construct, under Construction Permit 14-DMM-191 expires 36 months after the date of issuance. Construction or modification and an initial operation period for equipment shakedown, testing and Department evaluation of operation to assure conformity with the permit conditions is authorized for each emissions unit covered in this permit. Please note that the sources covered by this permit are required to meet all emission limits and conditions contained in the permit at all times, including during the initial operation period. If 36 months is an insufficient time period for construction or modification, equipment shakedown, testing and Department evaluation of operation, the permit holder may request and the Department may approve in writing an extension of this permit. The conditions of the construction permit are permanent, unless revised, superseded or revoked. [ss. 285.60(1)(a)2. and 285.66(1), Wis. Stats., and s. NR 406.12, Wis. Adm. Code; 14-DMM-191]

(3) **Modified Emission Units B07, B09 and B11**. The permittee shall operate boilers B07, B09 and B11 under the conditions in A. and B. of the current operation permit until the units are modified and operational. Boilers B07, B09 and B11 are considered modified and operational after the dry sorbent injection system C7911DSI is constructed and operational. Once the dry sorbent injection system C7911DSI is constructed and operational, boilers B07, B09 and B11 shall comply with the revised conditions in Sections A. and B. of the construction permit 14-DMM-191. The date of transition shall be the same date the modified units become operational. [s. NR 439.03(1), Wis. Adm. Code; 14-DMM-191]

(4) **New Emission Units P501, P502, P503, F504, F505 and F506**. Once constructed and initially operating, P501, P502, P503, F504, F505 and F506 shall operate under the conditions in Section O. and P. of the construction permit 14-DMM-191. [s. NR 439.03(1), Wis. Adm. Code; 14-DMM-191]

(5) **Malfunction Prevention and Abatement Plan**. The permittee shall update the facility's Malfunction Prevention and Abatement Plan to include the operation and maintenance of the control equipment associated with the modified emission units B07, B09 and B11 and the new emission units P501, P502, and P503. [s. NR 439.11, Wis. Adm. Code; 14-DMM-191]

(6) **Emission Stack Testing**.
(a) The permittee shall conduct compliance emission stack tests of modified emission units B07, B09 and B11 for particulate matter, PM10 and PM2.5 emissions within 180 days of the initial startup of the dry sorbent injection system C7911DSI.
(b) The permittee shall conduct compliance emission stack tests of new emission unit P502 for visible emissions, particulate matter emissions, and PM10, unless PM10 testing is determined to be technically infeasible. These tests shall be conducted within 180 days of the date emission unit P502 becomes operational.
(c) If compliance emission test(s) cannot be conducted within the time frames specified, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
(d) All testing shall be performed with the emissions unit operating at capacity or as close to capacity as practicable and in accordance with approved procedures. If operation at capacity is not feasible, the source shall operate at a capacity level which is approved by the Department in writing.
(e) The Department shall be informed at least 20 working days prior to any stack testing so a Department representative can witness the testing. At the time of notification, a compliance emission test plan shall also be submitted to the Department for approval. When approved in writing, an equivalent test method may be substituted for the reference test method.
[s. NR 439.07, Wis. Adm. Code, Permit 14-DMM-191]

(7) **Compliance Reports/Records**. The permittee shall submit periodic monitoring reports and certification of compliance as required by ZZZ.3.a.(5) and (6) for any modified and new emission unit for the period when that unit becomes operational. Note that compliance monitoring and reporting requirements and limitations of any unmodified units remain in effect. [ss. NR 439.03(1)(b) and (c), Wis. Adm. Code; 14-DMM-191]

ZZZ. Conditions Applicable to the Entire Facility

11. Construction Permit 14-DMM-191 Transitional Language

(8) **Completion of Operation Permit Application**. The permittee shall update the permit application if any changes occur which are not specified or described in the plans and specifications approved under construction permit 14-DMM-191. The permittee shall submit an updated Compliance Assurance Monitoring Plan for the modified emission units B07, B09 and B11 with the operation permit revision application. [s. 285.65(3), Wis. Stats., s. NR 407.04(1)(b), Wis. Adm. Code and 40 CFR 64.5(a)2.; 14-DMM-191]

b. Compliance Demonstration:

(1) **Notifications**. The permittee shall submit to the Department of Natural Resources, Northeast Region Headquarters in writing, within 15 days of the date the event, the following:
(a) The date construction commences on the any new or modified emission unit(s) addressed in Permit 14-DMM-191.
(b) The date new baghouse C7911 and sorbent injection system C7911DSI become operational.
(c) The date new emission units P501, P502, P503, F504, F505 and F506 become operational.
[s. NR 439.04(1)(d), Wis. Adm. Code; 14-DMM-191]

(2) **Malfunction Prevention and Abatement Plan**. The owner or operator shall update the facility's Malfunction Prevention and Abatement Plan to include the modified emission units B07, B09 and B11 and the new emission units P501, P502, and P503 within 60 days of the date each unit becomes operational. [s. NR 439.11(1), Wis. Adm. Code; 14-DMM-191]

(3) **Emission Stack Testing**. Upon completion of any required compliance emission tests of the modified emission units B07, B09 and B11 and new emission unit P502, the permittee shall submit to the Department of Natural Resources, Northeast Region Headquarters two copies of the report on the tests for evaluation within 60 days of the date the tests were completed.
[s. NR 439.04(1)(d), Wis. Adm. Code; 14-DMM-191]

(4) **Submittal of Compliance Testing Information and Other Updates**. The permittee shall submit to the Department any updates of the permit application. Updates are required if any changes that occur which are not specified or described in the plans and specifications dated October 28, 2014, December 19, 2014, January 27, 2015, February 16, 2015, and March 4, 2015. The updates shall be made within 60 days of the date of the change. Other information to be submitted shall include the notification requirements, stack tests results, pressure drop range as specified in condition O.1.b.(4)(a), and a Compliance Assurance Monitoring (CAM) plan to comply with 40 CFR Part 64. [s. NR 439.04(1)(d), Wis. Adm. Code; 14-DMM-191]

(5) **Submittal Format**. All submittals described in this permit shall be made in writing and include the name of the facility, the facility's address, the construction permit number and a description of the affected emission unit(s). [s. NR 439.04(1)(d), Wis. Adm. Code; 14-DMM-191]

12. Source Obligation

a. Conditions:
(1) The permittee shall monitor the emissions of any regulated NSR contaminant that could increase as a result of the project covered under construction permit 14-DMM-191 and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change. [s. NR 405.16(3)(d), Wis. Adm. Code; 14-DMM-191]

b. Compliance Demonstration:

(1) The permittee shall submit a report to the Department if the annual emissions of any regulated NSR contaminant, in tons per year, from the project covered under construction permit 14-DMM-191, exceed the baseline actual emissions by a significant amount for that regulated NSR air contaminant, and if the emissions differ from the preconstruction projection that was provided to the Department. The report shall be submitted to the Department within 60 days after the end of the year. The report shall contain all of the following:
(a) The name, address and telephone number of the major stationary source.
(b) The annual emissions as calculated.
(c) Any other information that the owner or operator wishes to include in the report, e.g., an explanation as to why the emissions differ from the preconstruction projection.
[ss. NR 405.16(3)(f) and NR 408.10(5)(f), Wis. Adm. Code; 14-DMM-191]

(2) The owner or operator of the source shall make the information required to be documented and maintained pursuant to ZZZ.11.a.(1) available for inspection, upon request by the Department or the general public. [ss. NR 405.16(4), Wis. Adm. Code; 14-DMM-191]

ZZZ. Conditions Applicable to the Entire Facility

12. Source Obligation

a. Conditions:

(1) The permittee shall monitor the emissions of any regulated NSR contaminant that could increase as a result of the project covered under construction permit 14-DMM-191 and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change. [s. NR 405.16(3)(d), Wis. Adm. Code; 14-DMM-191]

b. Compliance Demonstration:

(1) The permittee shall submit a report to the Department if the annual emissions of any regulated NSR contaminant, in tons per year, from the project covered under construction permit 14-DMM-191, exceed the baseline actual emissions by a significant amount for that regulated NSR air contaminant, and if the emissions differ from the preconstruction projection that was provided to the Department. The report shall be submitted to the Department within 60 days after the end of the year. The report shall contain all of the following:
(a) The name, address and telephone number of the major stationary source.
(b) The annual emissions as calculated.
(c) Any other information that the owner or operator wishes to include in the report, e.g., an explanation as to why the emissions differ from the preconstruction projection.
[ss. NR 405.16(3)(f) and NR 408.10(5)(f), Wis. Adm. Code; 14-DMM-191]

(2) The owner or operator of the source shall make the information required to be documented and maintained pursuant to ZZZ.12.a.(1) available for inspection, upon request by the Department or the general public. [ss. NR 405.16(4), Wis. Adm. Code; 14-DMM-191]

ZZZ. Conditions Applicable to the Entire Facility

13. 40 CFR Part 63, Subpart DDDDD Compliance Extension

a. Conditions:

(1) The permittee shall meet the applicable requirements of 40 CFR part 63, subpart DDDDD – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters on or before the alternative Subpart DDDDD compliance date approved below: [26]
(a) The Subpart DDDDD compliance date for boilers B07, B09 and B11 is extended from January 31, 2016, to January 31, 2017, to install and achieve system design performance for any controls identified by the permittee for boilers B07, B09 and B11.
(b) The permittee shall follow, to the extent practicable, the project schedule provided below:
(i) January 2015-January 2016: Site engineering and installation support.
(ii) April 2015: Groundbreaking for DSI system and baghouse system.
(iii) November 2016 – January 2017: Vendor guarantee tests.
(iv) January 31, 2017: Final compliance with 40 CFR Part 63 Subpart DDDDD.
[40 CFR ss. 63.6(i)(4)(i)(A), 63.6(i)(10) and 63.7495(b); s. 285.65(13), Wis. Stats.; ss. NR 460.05(7)(c)1.a. and NR 460.05(7)(h), Wis. Adm. Code; est. in 445031180-P14]

(2) To minimize emissions from Boilers B07, B09 and B11 during the extension period, the permittee shall pursue the following guidelines:
(a) The boilers shall fire the same coal and biomass fuels as previously fired.
(b) The boilers shall continue to operate existing air pollution control equipment in accordance with existing permit conditions.
(c) Once the DSI system and baghouse controls are able to run, and understanding that the controls are not yet ready for compliance operation, the permittee shall reasonably utilize the installed DSI system and baghouse controls to control

[26] The Department approved the permittee's request to extend the compliance date under the boiler MACT (40 CFR part 63, subpart DDDDD) for boilers B07, B09 and B11 in a letter dated April 4, 2014.

ZZZ. Conditions Applicable to the Entire Facility

13. 40 CFR Part 63, Subpart DDDDD Compliance Extension

boiler emissions during the extension period. This requirement will ensure the proper operation of the installed controls during the extension period as provided under s. NR 460.05(7)(h)5., Wis. Adm. Code.
[40 CFR ss. 63.6(i)(4)(i)(A) and 63.6(i)(10); s. NR 285.65(13), Wis. Stats.; s. NR 460.05(7)(c)1.a, Wis. Adm. Code; est. in 445031180-P14]

b. Compliance Demonstration:

(1) The permittee shall comply with the compliance demonstration requirements of Subpart DDDDD on or before the alternative Subpart DDDDD compliance date approved under condition ZZZ.13.a.(1). [s. 285.65(13), Wis. Stats.; 40 CFR §63.7495(b); est. in 445031180-P14]

(2) Any performance testing and other activities required for boilers B07, B09 and B11 to demonstrate initial compliance with Subpart DDDDD are appropriately extended to comply with the Subpart DDDDD compliance date approved under condition ZZZ.13.a.(1). [ss. NR 460.05(7)(h)4. and NR 460.06(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats., and 40 CFR §§ 63.6(i)(10)(iv) and 63.9984(f); est. in 445031180-P14]

(3)(a) The permittee shall submit two (2) copies of a compliance extension report for Boilers B07, B09 and B11 to the Northeast Region Air Management Program within 30 days of the achieving final compliance with the steps outlined in Condition ZZZ.13.a.(1)(b), or within 30 days of January 31, 2017, whichever is earlier.
(b) The compliance extension report shall contain the date that each milestone in Condition ZZZ.13.a.(1)(b) was completed. [s. NR 407.09(4)(a)3.b., Wis. Adm. Code; s. 285.65(10), Wis. Stats.; est. in 445031180-P14]

(4) The permittee shall comply with the reference test methods, recordkeeping, and monitoring requirements of Subpart DDDDD on or before the alternative Subpart DDDDD compliance date approved under condition ZZZ.13.a.(1). [s. 285.65(13), Wis. Stats., 40 CFR §63.7495(b); est. in 445031180-P14]

(5) The permittee shall keep records of the compliance extension report required by Condition ZZZ.13.b.(3). [ss. NR 407.09(4)(a)1. and NR 439.04(1)(d), Wis. Adm. Code; est. in 445031180-P14]